

THE IMPORTANCE OF SOCIAL FACTORS
IN
THE MEDICAL CARE OF ARAB REFUGEES.

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INTRODUCTION.

Background and history.

There are at present in the Kingdom of Jordan some 350,000 Arab refugees, wretched flotsam of the recent war in Palestine.

Some measure of relief for these people was provided from December, 1948, to May, 1950, by a British Red Cross Commission, which functioned as a self-contained unit within the framework of the larger organization of the League of Red Cross Societies.

Some of the refugees were scattered throughout the country in huge tented camps, others lived a precarious life on the fringe of the larger towns and some, probably the most fortunate, melted away into the wilderness and were absorbed by remote villages and wandering bedouin tribes.

Here we are concerned with a community of rather more than sixteen thousand souls which settled in May, 1949 in the little hamlet of Sukneh in the interior of Transjordan.

The village of Sukneh nestles in a basin of barren hills; nearby runs the River Zerka (Jabbok), a perennial stream of unexpected beauty, to which the grateful desert gives back a fringe of green crops and graceful trees.

Except by the riverside, the only vegetation during the summer is sparsely scattered arid scrub, acceptable only to the ubiquitous goat and long-suffering camel. It is hot, dry, and very dusty; hot winds fan the dust up into all-pervading whirling clouds. The area is highly malarious and stands some 800 metres above sea level.

The author was appointed as medical officer in charge of the

Sukneh camp in September, 1949, following a previous period of military service in Palestine.

The camp was divided into sections according to the place of origin of the inhabitants in Palestine. Public places included a school, tented clinic, mosque, administrative tents and store, market (suk), water point, milk distribution centre and infant feeding centre.

The general layout of the camp is indicated in figure 2.

The European staff lived in mud houses in the village of Sukneh itself.

During the winter months this region becomes cold and wet. The rough track to the village becomes impassable for quite long periods. The Jordan valley, however, remains fairly warm and the government, in addition, recognized the need for a pool of labour in this area for the implementation of certain land development projects recommended by the United Nations Economic Survey Mission for the Middle East.

For these reasons it was decided that the camp and its inhabitants should be moved in toto to a more permanent site in the Jordan valley in the autumn of 1949. As a further attraction, H.M. the late King Abdullah had offered to hand over to the refugees an extensive area of his lands in this area for cultivation.

The move was started on December 3rd and was completed eight days later. To transport so many people a distance of over 100 kilometres over rough roads and mountain tracks was not an easy task but was nevertheless accomplished without accident or untoward event.

El Karameh, as the new camp was called, where the refugees remain at the present time, is situated below the foothills on the east side of the Jordan valley. It is a few kilometres north of the village of Shuneh and lies 200 metres below sea-level. In the summer the heat is

very oppressive and mosquito-breeding is widespread with a high incidence of malaria amongst the local inhabitants.

Detailed plans for the layout of the camp were made before the move and these were strictly adhered to during its re-establishment.

This is indicated in figures 3 and 4.

The Arab refugee as a medico-social problem.

The medical care of these people was a privilege for which the author will always be grateful. Moreover it provided an ideal opportunity for a first hand study of a particular type of medico-social problem.

Social medicine is well established nowadays as an academic discipline in its own right. In its efforts to obtain for itself such recognition it has sought, perhaps too much, scientific exactitude in the measurement of human frailty, using as it does the yardstick of vital statistics. Let no one however deny the great value of vital statistics in the elucidation of the social aetiology of sickness, it is my purpose rather to stress that the qualitative view of medico-social problems is in certain cases as valuable as the quantitative one.

In its endeavours towards technical perfection social medicine has to some extent suffered from the tendency of other branches of modern medicine to forsake the bedside for the laboratory bench. The old arts of clinical examination are being lost and the traditional humanity is being swamped by an avalanche of physical and chemical therapeutics.

The late Professor J.A. Ryle (1943), one of the pioneers of social medicine, has said:-

"The sciences and techniques have come to dominate medicine to the exclusion of the most important science of all - the science of man - and

the most important technique of all - the technique of understanding. Science without humanism may work with atoms but it will not work with man".

Again, it has been well said:-

"For medicine is not all science. There are indeed many medical problems which defy measurement. Human life is full of imponderables, for man is not a physical being only". (Cohen, 1950).

Social medicine seeks its pathogenic agents in such factors as overcrowding, illegitimacy and unemployment. How often, however, does the reaction of an individual, or indeed of a community, to sickness depend on such factors as religion, traditional customs and prejudices? In our own country and our own time strange family rites about bringing up the baby still exist, the Christian Scientist still creeps unwillingly to the surgery with inoperable carcinoma of the stomach. How much more important will these matters be amongst a people where religion, folk lore and superstition bulk large in the conduct of their daily lives. The physician who ministers to such people will need some knowledge of these matters, for without it he may find himself grappling aimlessly in the dark with a monster whose insidious presence he senses but which he can neither see, nor hear, nor feel.

The general medical practitioner would seem to play a cardinal role, along with the sociologist, the demographer and the geneticist in the functions of social medicine. In taking over the medical care of an Arab refugee camp it was found, for reasons which emerge later, to be impossible to compile any very accurate vital statistics. On the other hand there was evidently much scope for a qualitative study of certain aspects of social medicine.

Period under review.

The period selected for survey consists of 35 weeks, dating from 4.9.1949 to 30.4.1950. The operation actually continued until 21.5.1950 but statistical returns were not submitted during this final three weeks.

It is intended, therefore, to give an account of the medical practice in a large refugee camp, to set it down against the background of the daily life of an Arab refugee, of his hopes and fears, his religion, customs, and folk-lore, of his daily bread and the manner of his living, and to correlate, as far as possible, the one with the other.

Thus it was noticed that there was a conspicuous absence of illegitimate children; one explanation for this became evident when it was discovered that custom demanded the death of a pregnant unmarried girl at the hands of her brothers or father. This was doubtless also responsible for the very low incidence of venereal disease. A sudden drop in the birth rate over a period of about a month seemed without obvious explanation until it was realised that some nine months previously the fast of Ramadan had taken place, during which time the Mohammedan religion requires abstention from sexual intercourse.

The European physician working among Arabs may understandably be surprised to find the bottle of medicine he has prescribed for an ailing child hanging over the entrance to a tent as a charm to keep away evil djinns (jân) or sprinkled in someone's footsteps to counteract the effects of an evil eye. The majority of his patients will come to him via a local medicine man whose arts include scarification, wet and dry cupping, widespread use of the cautery and the exhibition of certain amulets and charms. In the words of Bussell (1950) "the bodies of the

poorer Arabs bear their medical histories literally branded on to their skins". Knowledge of such matters is manifestly important if there is to be success in either the treatment or prevention of disease. The Christian Scientist with inoperable carcinoma of the stomach and others, that should know better, who dally among the quacks, present a similar problem. Indeed it may be on such small threads rather than on the purely technical side of medicine that human life and welfare depend.

The importance of Folk Lore in relation to European Medicine.

The Arab is by no means a primitive, he is, however, by most standards at any rate, if even because he is polygynous, less "civilized" than his European counterpart. Yet even in Britain in this year there are many of our countrymen who are in civilization but not of it. It may not be possible to detect this mental incapacity by their habits, accustomed forms of life, their food, their votes, their churchgoing, but we can tell it by their tales, proverbs and by their charms. Thus a custom or saying may be traced back to remote antiquity and we may still study the past in the present; paradoxically an archeology of the living mind. It is here that an example of the value of the study of folk-lore becomes apparent. The current thoughts of the real body of the people are by it ascertained; we learn by it the nature of the foundation on which conjectures and hypotheses are based, which may lead in due course to some understanding of man and towards the solution of his greatest problem - the growth of his own mind.

These views were expressed by W.G. Black in 1883. In one of his more memorable paragraphs he says:-

"Charms, spells and amulets, trifling and unimportant in themselves and in reference to modern medicine, take an altogether different aspect when viewed together as a whole, in illustration of that mental progress of society which is more correctly indicated by the word "culture" than by "civilization". They cease to be merely melancholy or ludicrous facts, absurd and humiliating; they are like leafless trees in winter, naked and unsheltering, but still useful in pointing out the way which the snow has concealed. By their help we recover the road before night conceals all".

But how to gain some insight into the significance and deeper implications of folk medicine ? Although nowadays some of his opinions have been discredited, it is contended that part, at any rate, of the truth is to be found in Frazer's (1922) postulation of the two fundamental laws of magic - the law of similarity - and the law of contiguity. This at best only reduces the problem by the operation of common factors, there is still much besides to which these laws would not seem to apply.

Some notes on the evolution of magic and religion have been added at the end of the work as an appendix.

For these reasons then I have chosen to dwell in the pages following on certain aspects of folk medicine and folk-lore among these Arab refugees, believing that acquaintance with such matters is of importance both in the treatment of their sickness and in maintaining their health. Taking a broader view, such knowledge may in the mass contribute something to our understanding of man. It may thus provide

a prognostic criterion both for the individual and the society in which he dwells.

On the other hand, it is important to maintain a sense of proportion in regard to other factors in the social aetiology of sickness. Whereas in Britain such factors are to be found in housing, unemployment and various industrial hazards, in the society under consideration the nature of sickness was largely coloured by religious scruples, racial temperament and by the special status of the people as refugees. Such factors conditioned not only the incidence of specific disease, but also their treatment and the efficacy of general preventive and hygienic measures. To these factors may be added unfavourable climatic conditions, the limited resources of medical relief, and lack of education in an ill-fed, ill-housed, closely packed community.

Possible consequences of widespread Public Health measures in overpopulated, undeveloped Areas.

No thesis such as this, which purposes to put forward the importance of social factors in relation to a specific type of medical practice, would be complete without some reference to its converse. That is to the effect of public health measures on this society, particularly with regard to the delicate balance between population and food.

Authorities differ in their views on the advisability of widespread public health control of certain diseases, particularly malaria, in areas where the resultant decrease in the general mortality and sudden rapid increase in the population may strain existing food supplies to breaking point and thus pave the way for worse evils than before; epidemics, famines

and even wars.

Another argument contesting the desirability of malaria control has been raised and is based on different grounds, that the degree of immunity to malaria acquired by the adult indigenous inhabitant of a malarious area varies directly with the intensity of the disease and that such control in highly malarious areas might in the long run be harmful. Antagonists of this theory (Macdonald, 1951) accept the existence of partial immunity in the adult but point out that it is acquired at a cost in childhood and to the community as a whole, a cost which far outbalances the benefits it brings.

Davey (1951), however, advocates a more cautious approach to this problem, which in spite of recent correspondence in the British Medical Journal (Allchin 1951) is not merely a question of ethics. He states that where "population pressure" already exists, widespread control of malaria is likely gravely to affect an already serious problem by greatly decreasing the standards of living. Malaria, he says, and other infections, appear to have important effects in stabilizing populations, a similar view to those expressed by Malthus (1798). Man is an animal in ecological balance with his environment, a balance which has already been disturbed by Western influences operating in primitive areas. Widespread malaria control in such areas would be likely to cause an unprecedented expansion of the population in the 1st, 2nd, and 3rd phases of the demographic cycle (Blacker 1947), and before undertaking this Davey suggests that efforts are concentrated rather on economic development, mass education and agriculture and that the energies of medical science should be concentrated on disabling rather than mortal diseases. Vogt (1949) would seem to concur with these views, perhaps

even more strongly. Macdonald (1951), however, takes a much more optimistic view in advocating immediate large scale public health measures in controlling these diseases, simultaneously with widespread educational and agricultural programmes.

The question was fought out at a conference of the World Health Organization in Uganda in 1950 and the recommendation of the conference was to

"Governments responsible for the administration of African territories that malaria should be controlled by modern methods as soon as feasible whatever the degree of endemicity ..."

The statement that it may be undesirable to control malaria has thus been examined and rejected. Nevertheless, time alone will show what results may follow this policy and in the meantime it provides a fascinating exercise for the combined action of demographer, sociologist, educationalist, agriculturalist and medical scientist. This is social medicine par excellence, bearing out admirably Crew's (1944) definition of the scope of this branch of knowledge which includes:-

"Social Medicine is medical science in relation to groups of human beings. Rooted in medicine and sociology it includes preventive medicine as well as industrial medicine. It differs from these in that it is not merely or mainly concerned with the prevention and elimination of sickness but is concerned also and especially with the study of all the social agencies which promote or impair the fullest realization of biologically and socially valuable human capacities. It includes the application of sociological concepts and methods to problems of health

and disease".

Later, discussion is offered on the population problem of the Arab refugee and its relation with precarious economic resources.

In describing the structure of Arab refugee society against the background of their medical care most of their afflictions of Public Health importance are mentioned and an account is offered of the way in which these were approached from both the therapeutic and preventive viewpoints. The terms "Western", "orthodox" and "European" medicine are used arbitrarily in contradistinction to "folk" or "local Arab" medicine.

Manifestly it would be impossible to describe the nature of a people within the compass of such a small work, it is therefore stressed that those facets of the daily life of an Arab refugee selected for description are based on personal observation and shew only by example some ways in which such matters affect the medical care of such people.

These examples, however, should serve to indicate the importance of sociological concepts in the medical care not only of the people under consideration but of simple folk the world over.

As a by-product, so to speak, of this main thesis it may be that worthy pillars may be set up on which the structure of a healthier, happier people may be built out of the flotsam of this war in Palestine.

"Education", says Kershaw (1946) "is the most important medicine which the physician to a sick society possesses", and this is regarded, in its broadest sense, for both individual and group, as not the least important aim for whosoever shall lead these unfortunate people from the shadows out in to the warm sunshine of prosperity.

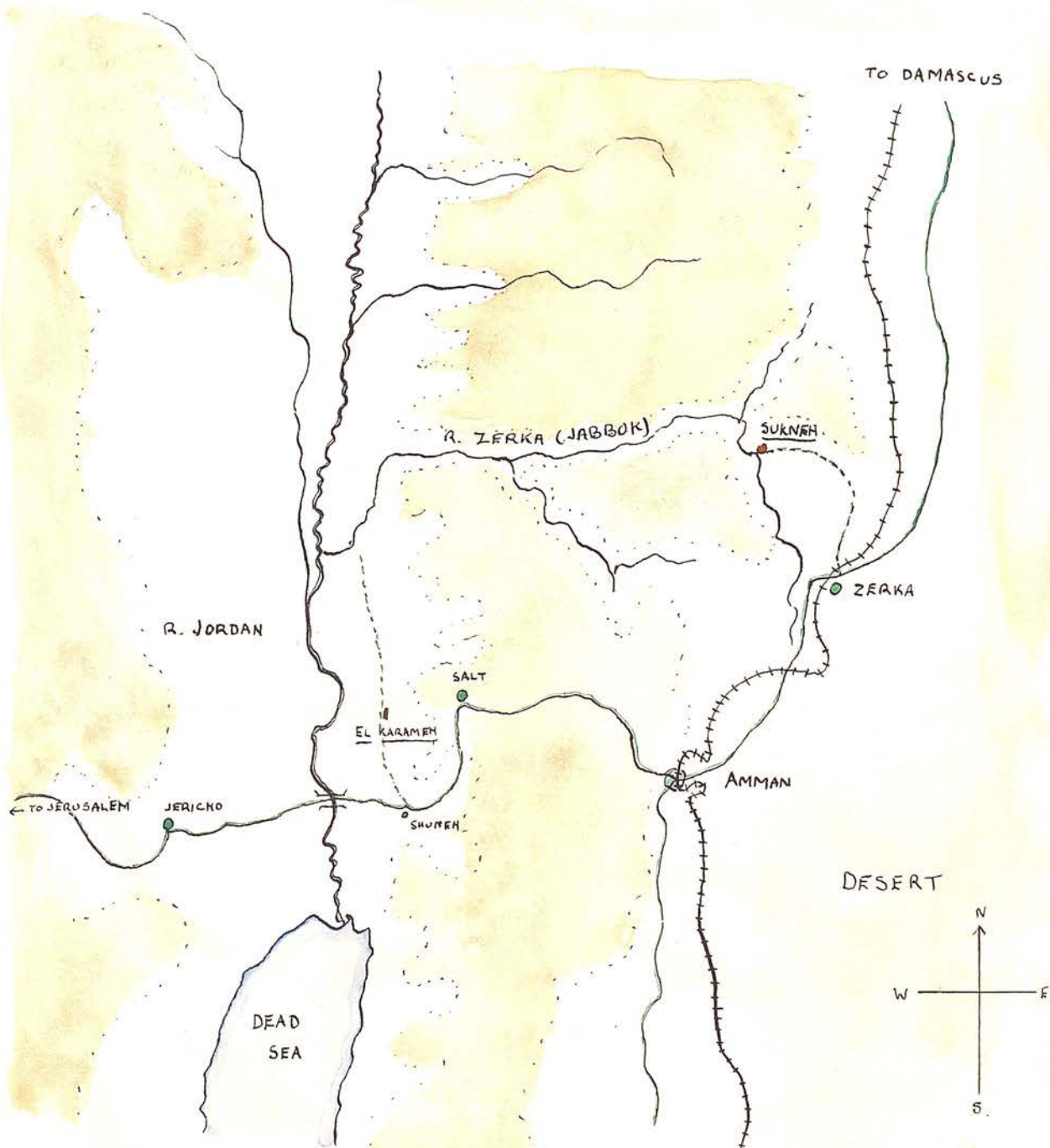
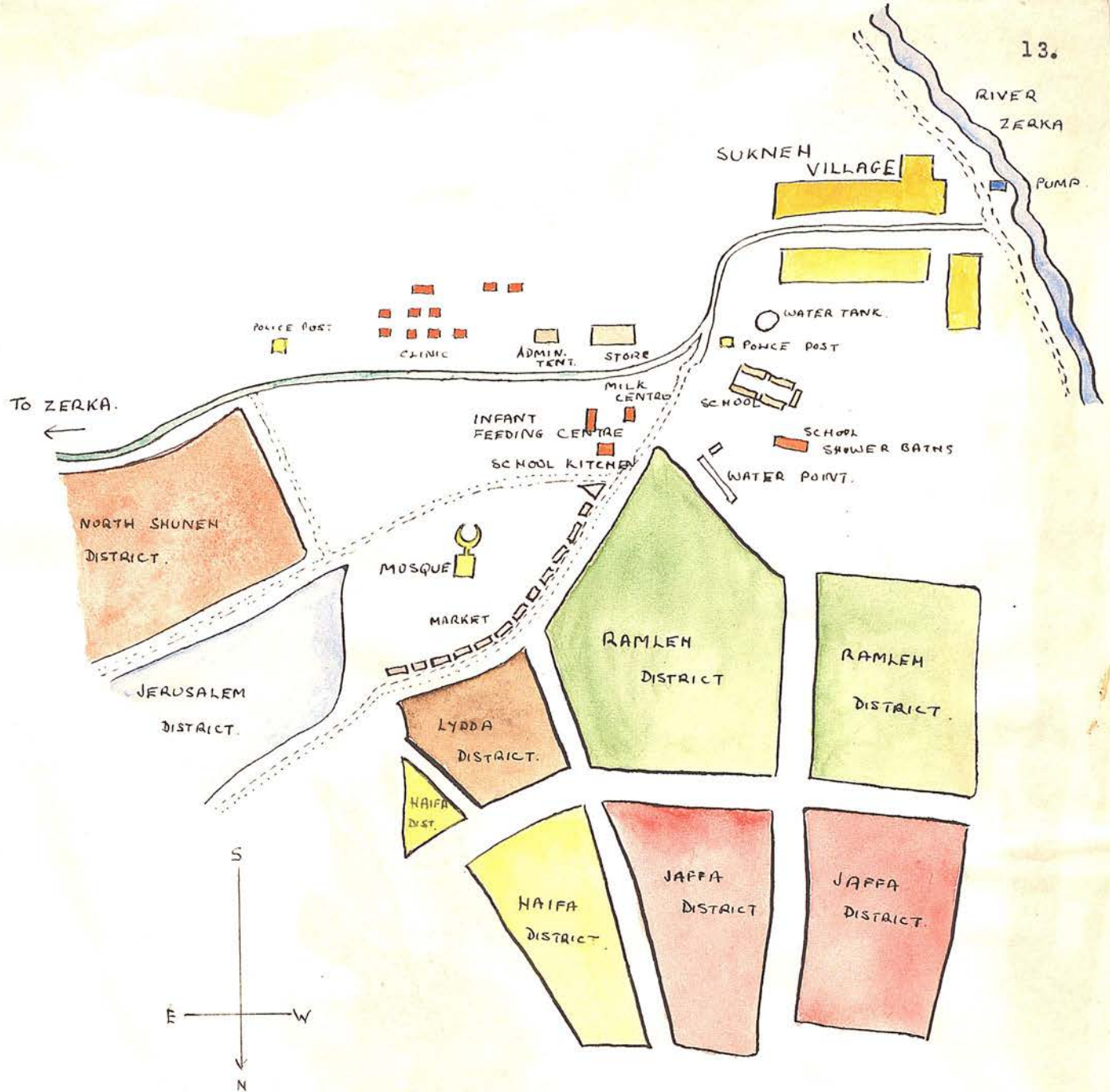


FIG. 1.

PART OF THE HASHEMITE KINGDOM OF THE JORDAN.



RAMLEH DISTRICT	APPROX. NUMBERS	3539	} MAINLY TOWNDWELLERS
JAFFA "	"	3125	
LYDDA "	"	1350.	
JERUSALEM "		4229	} MAINLY COUNTRY DWELLERS AND BEDOUIN.
NORTH SHUNEN "		2165	
HAIFA "		1528	

FIG. 2.

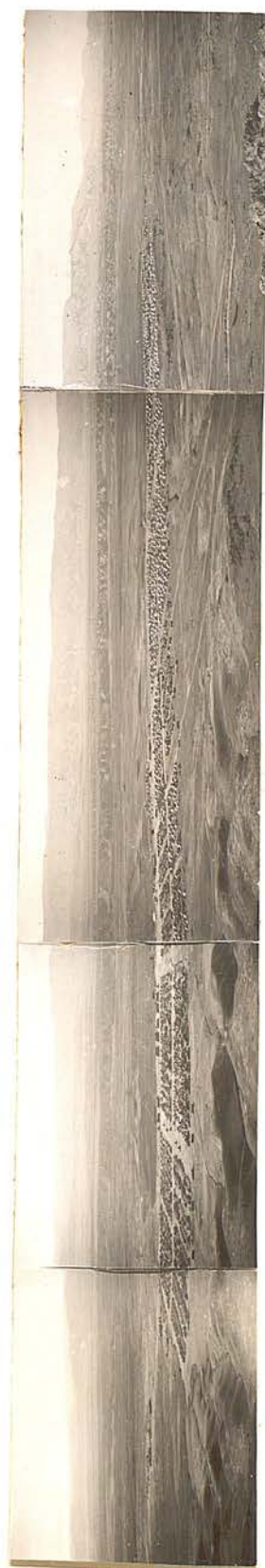
SUKNEH CAMP SEPTEMBER, 1949.



FIG. 3. EL KARAMEH CAMP, FEBRUARY, 1950.



SUKNEH. September, 1949. (From the North)



EL KARAMEH. March, 1950. (From the East)

Fig. 4.

SECTION A.

THE MEDICAL CARE OF ARAB REFUGEES.

I. VITAL STATISTICS.

The compilation of accurate vital statistics presented an almost insuperable problem.

In February and March 1949 a census had been carried out by the League of Red Cross Societies, which resulted in the following figures for Sukneh camp:-

Men	3,184
Women	3,972
Children (under 15)	<u>9,557</u>
Total:	16,713

A number of factors combined to render it impossible to guarantee the accuracy of the figures obtained by registration and one had to be content with the recognition of a certain margin of error.

In the initial stages of an emergency operation such as this it was not possible for already overburdened fieldworkers either to carry out such detailed investigation as is normally done under more stable conditions or to set up elaborate machinery for doing so.

The refugees resorted to many subterfuges in an attempt to inflate their numbers and thus to increase the amount of rations issued to them. However, as far as was humanly possible a constant checking and rechecking were made and in the face of the false registrations, duplications and other varieties of fraud, the final figures were not thought to contain more than 5 - 10% of error.

Another factor which caused difficulty in making a census was the constant movement which went on among the refugee population. Arabs move easily from place to place and this roving tendency presented a serious operational difficulty.

Refugee co-operation was further hampered by the innate prejudice amongst Palestinian Arabs against the counting of either their persons or their goods. This is to be discussed further later on.

Throughout the operation there was a constant checking of registrations by the administrative staff which resulted in a steady decline in numbers.

Further efforts at a census were resisted strongly by the refugees sometimes with violence, since if the false registrations were discovered they stood to lose rations. Nevertheless a further census was carried out; the particulars of each person were recorded and classified on separate lists according to:-

- 1) Sex and Origin.
- 2) Nationality and Origin.
- 3) Sex and Present Domicile.
- 4) Origin and Religion.
- 5) Religion and Present Domicile.
- 6) Origin and Present Domicile.
- 7) Origin and Occupation.
- 8) Occupation and Religion.
- 9) Present Domicile and Occupation.

As a result the following light was shed on the structure of the refugee population in Transjordan in April, 1950. (League of Red

Cross Societies, 1950.) This does not include Arab Palestine (since occupied by Jordan).

Total refugee population		90,450
Principal districts of origin in Palestine	Jerusalem	21,000
	Jaffa	14,000
	Beisan	12,500
Religion	Moslem	84%
	Christian	16%
Nationality	Palestinian	99.5%
Able-bodied male workers		10,719
Principal occupations	Farmers	2,838
	Labourers	2,248
	Clerical	938
	Merchants	916

In April, 1950 at El Karameh camp the census resulted in the following figures:-

Adult males	3,006
Adult females	3,394
Children (up to one year)	659
Children (1 - 15 years)	7,725
Total:	14,784

This, compared with the figures the previous year at Sukneh showed a drastic drop. Most of the questioning and investigation, however, was done by paid Arab Clerks who were anxious to justify their posts and there was no doubt that there was an over-correction. There was a real drop in the actual figures as well, for some of the refugees had moved off to work in the towns and some had elected to remain in the vicinity of Sukneh when the camp had been moved from there to its new site in December, 1949.

Birth and Death rates.

The birth rates are among the few figures which are likely to be at all accurate. Each mother hastened to register her newborn as it meant a new ration card, a special issue of clothing, and also that the mother was entitled to extra milk, both for herself and child.

Since the precise numbers of people in the camp were not known, it was not possible to calculate accurately the yearly birth rate per thousand head of population. For the sake of convenience though, an average figure of sixteen thousand was considered to be a fair working estimate of the population and the birth rate was calculated on this basis.

A graph (Fig.4) showing the birth rate of this community between September, 1949 and April, 1950 is compared with one drawn from figures compiled by the League of Red Cross Societies for the birth rate amongst refugees throughout Jordan, Syria and the Lebanon during this period. This graph shows that the birth rate during September reached a very low ebb, probably a reflection of the unsettled conditions under which the refugees were living at the beginning of 1949. The rate then rose to the level of 48 per thousand per year, thus nearing the normal rate of 50 per thousand per year as recorded during the former British Mandatory government of Palestine. Following this, there is a significant trough whose deepest part is between February and March of 1950; it seems likely that this is a direct reflection of the fast of Ramadan, which in 1949 fell between the 27th June and the 26th July, during which period, amongst other things, Moslem law forbids marital intercourse. The very high proportion of Moslems in the camp (there were only two

Christian families) no doubt explains the more noticeable drop during this period compared with that over the whole area where the numbers were diluted by a higher proportion of Christians.

No reliance can be placed on statistics of deaths among the refugees, for many deaths were deliberately concealed and the bodies buried in secret so that rations could still be drawn in the name of the deceased. The normal death rates for the indigenous population of Palestine was 18 - 20 per thousand per year and there was no reason to suppose that the figures were greatly in excess of that.

The following table (League of Nations, 1945) shows the annual birth and death rates for Palestinian Arabs from 1922 - 1943 :-

	1922 -25	1926 -30	1931 -35	1936	1937	1938	1939	1940	1941	1942	1943
Birth rate	50.3	53.5	50.3	53.1	49.8	47.3	46.4	47.4	49.2	45.1	52.3
Death rate	27.1	28.3	25.3	20.0	24.9	18.7	17.4	24.7	21.4	19.8	19.0

Principal diseases.

For the period under review, figures have been compiled for the following illnesses:-

Malaria.

Bacillary dysentery group (including other acute diarrhoeas but excluding amoebiasis and enteric fever.)

Conjunctivitis.

Measles.

Whooping cough.

Pneumonias (all types).

and the figures illustrated graphically (see figs. 5,6,7).

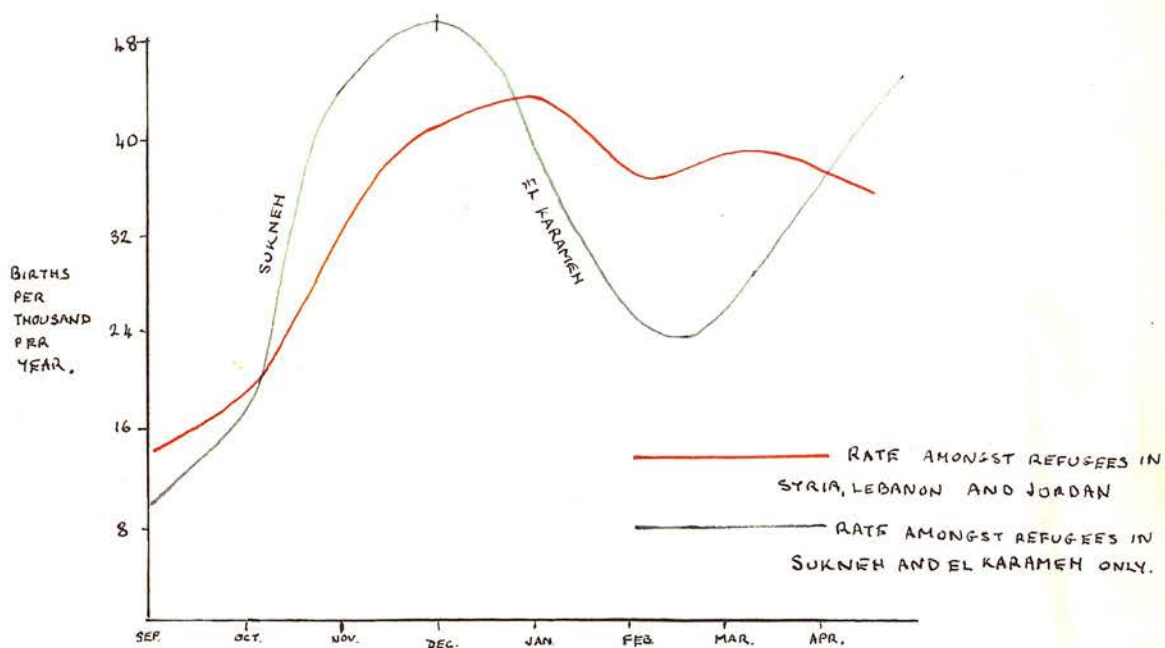


FIG. 5 BIRTH RATES.

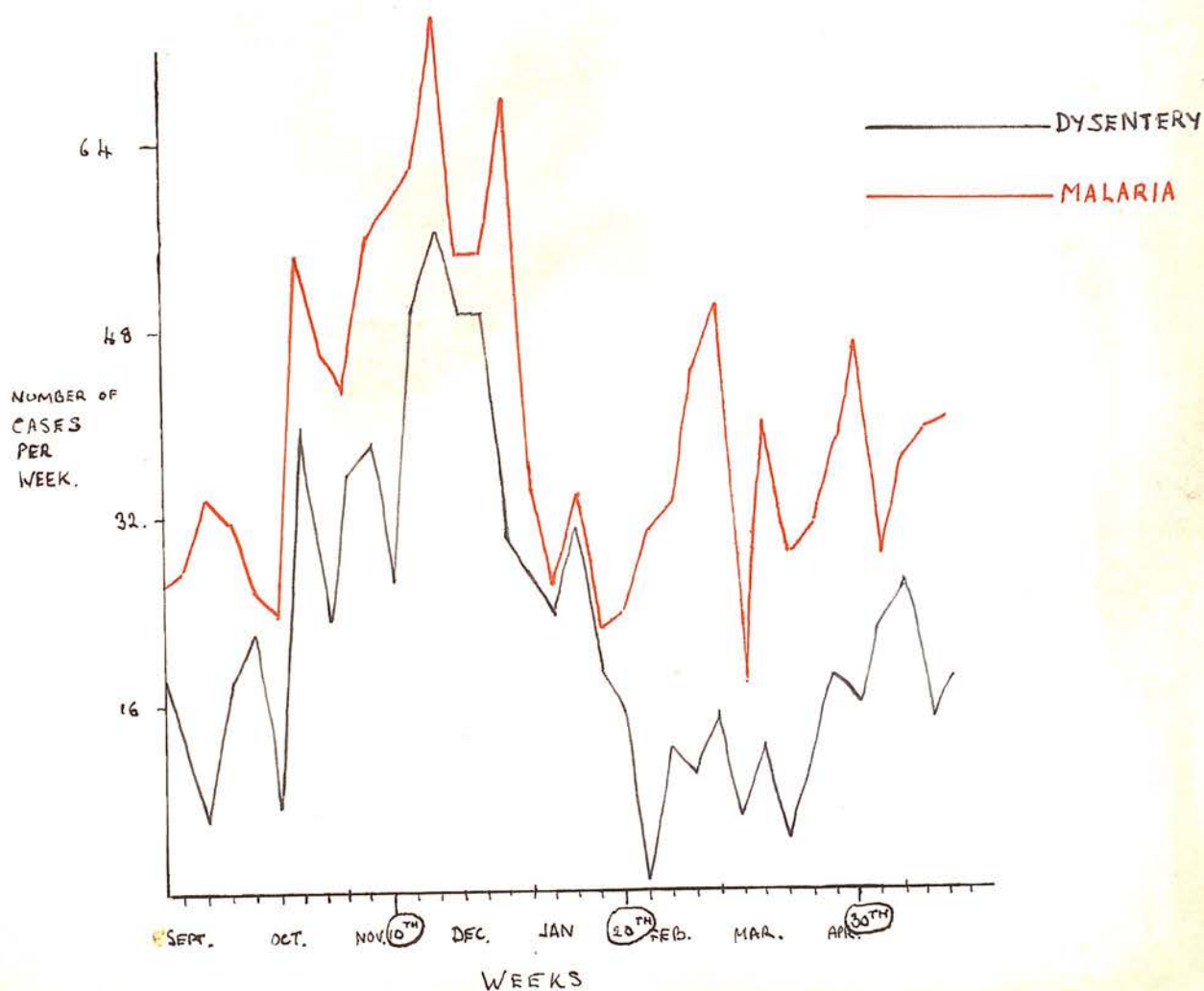


FIG. 6. MALARIA AND DYSENTERY (NON-SPECIFIC, EXCLUDING AMOEBIC).

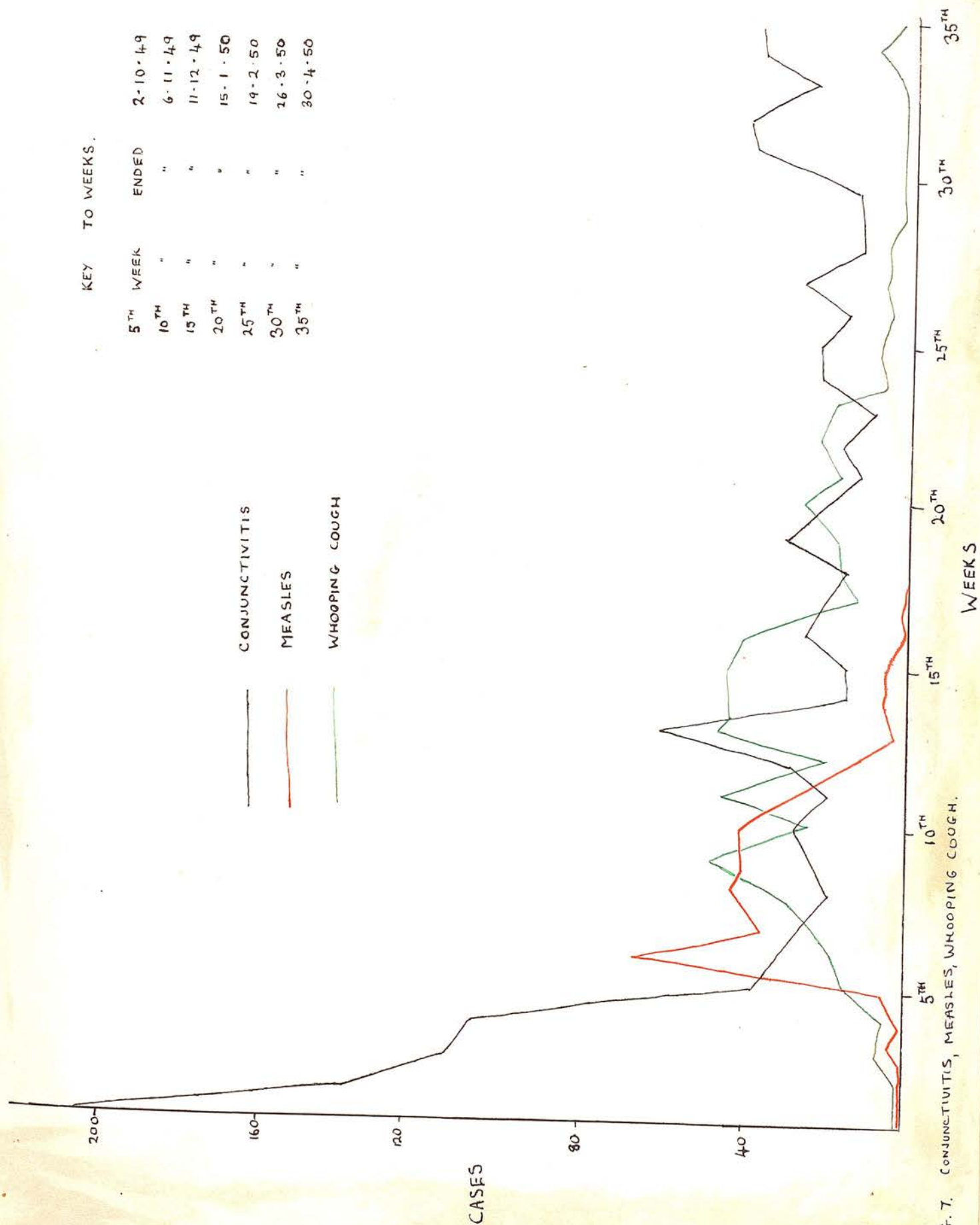


FIG. 7. CONJUNCTIVITIS, MEASLES, WHOOPING COUGH.

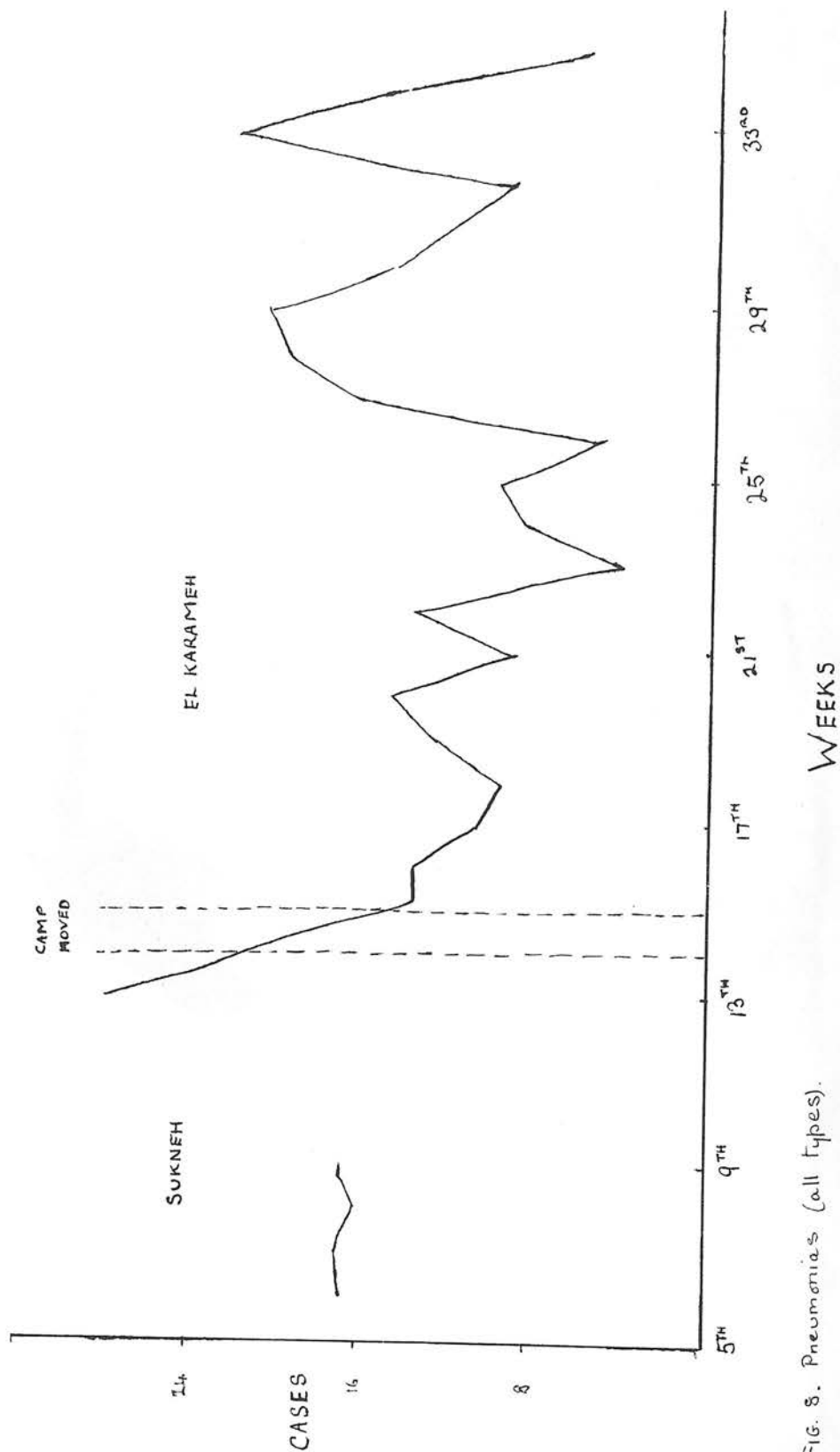


FIG. 8. Pneumonias (all types).

It should be said at once that although all possible steps were taken to ensure accuracy of these figures, there was inevitably some duplication, where several people were involved in making the records. In addition in most cases the diagnosis was made on purely clinical grounds, only rather primitive laboratory facilities being available. Although many blood smears were taken for malarial parasites, particularly in doubtful cases, it was impossible to investigate more than a small proportion of cases.

This being so no very far-reaching conclusions are to be drawn from these graphs; taken broadly, however, they do illustrate a few features of interest to anyone concerned with the aetiology of sickness in the mass. Thus, a dramatic drop in the incidence of conjunctivitis during September, 1949 and a tendency to rise again in April, 1950 was noticed to coincide with a decline in the amount of dust and with the fly population, both of which may be implicated in the dissemination of this condition.

On the whole the general morbidity decreased after the move of the camp from Sukneh to El Karameh in the Jordan valley which took place in the 14th week; it also remained at a fairly low ebb during the winter months of December, January, February, and March.

A curious parallelism is detectable between the incidence of malaria and dysentery, the peak period occurring in November. Almost none of the malaria was thought to be primary infection, however, and the onset of cold weather would probably favour the onset of relapses.

Measles became a serious problem between the 5th and 13th weeks but it appeared to burn itself out, and subsequently caused no trouble, except for its legacy of broncho-pneumonia and otitis media.

Whooping cough figures confirm current epidemiological views (Banks, 1951), that it is more common in winter and spring, is usually present throughout the year, and, unlike measles, rarely subsides to a very low level.

Unfortunately the series of figures for pneumonias (all types) is broken. These infections reached a high pitch in November, in the latter stages of the measles outbreak, and again rose in February and April. The weather during February was cold and frequently wet.

Records were also kept of the incidence of tuberculosis, enteric fever, trachoma, amebiasis, syphilis, meningitis, and diphtheria but the incidence of these illnesses was small in comparison with those already described and show no significant trends.

II. FURTHER NOTES ON THE PRINCIPAL DISEASES.

Malaria.

This constituted the greatest single medical problem. The people were saturated with the parasite and there is little doubt that such ill-health as there was had much of its roots herein. The picture of anaemia, cachexia, splenomegaly, the muddy complexion and the listless expression was a common one.

Particular pains were taken to investigate any infants with suspicious fevers and only one (which subsequently died from cerebral malaria) was found to have parasites in the blood. This absence of fresh cases among infants substantiated the general impression that the

great majority of cases were relapses rather than primary infections.

As will be described later, widespread antimalarial measures were adopted and the latter observation supports the view that these were highly successful.

All European personnel took precautions against mosquito bites and in addition were given paludrine (proguanil) 100 mgms to be taken three times each week, except during the cold weather. Regrettably one member of the British staff of the camp succumbed to benign tertian infection; this occurred in January, 1950, when it was too cold for mosquito activity in the Jordan valley, so it had almost certainly been contracted the previous summer and lain dormant under the suppressive effect of paludrine.

Paludrine was found to be the most effective antimalarial drug and was used almost routinely in all cases. Usually a course of 1.0 - 2.0 Gm given over a period of ten days was found to be sufficient to cure a relapse of benign tertian malaria. A certain quantity of paludrine (and other drugs) inevitably found its way on to the black market and for this reason Bussell (1950) advocated widespread suppressive therapy by incorporating the drug in the flour ration. Recently however, in spite of very slender evidence it has been suggested (Cosgrove, 1951) that prolonged administration of this drug may result in harmful side-effects, a possibility of which due regard should be taken.

Quinine was also used frequently with good effect, both orally and parenterally. Mepacrine, although used on occasion, was found to have the great disadvantage that it could be made into an attractive yellow dye and was much in demand for colouring headdresses and other garments.

Tuberculosis.

It was maintained by the chief medical officer of the relief organization that this was not a very widespread disease (League of Red Cross Societies, 1950) among the refugees. This opinion was contrary to experience in the Sukneh-El Karameh camp where it constituted a serious problem.

At the conclusion of the operation there were under treatment about thirty known cases of open pulmonary tuberculosis, seven cases of tuberculous peritonitis and a further thirty or forty cases of tuberculous cervical adenitis, enteritis, and bone and joint infection.

Fifteen people were known to have died as a result of this disease in one form or other during the period under consideration; of these three were from miliary tuberculosis, and two from tuberculous meningitis.

Bussell (1950) also gave it as his view that tuberculosis was frequently to be found.

Radiological confirmation of the diagnosis could be achieved in many cases for there were small X-ray units at Salt Hospital (see later) and at the Italian Hospital in Amman. Sputum tests were difficult to arrange.

Facilities were most unsatisfactory for treatment and resolved themselves into mainly supportive and palliative measures. Surgical measures in appropriate cases were more successful.

Prevention

In an effort to secure some degree of segregation of the tuberculous from their otherwise healthy families, a group of tents was erected near the clinic at El Karameh where those with open pulmonary infections were requested to sleep. Those who co-operated willingly were supplied with

extra rations, a form of bribery which seemed justifiable under the circumstances; so close, however, were the ties of family that even the lure of food was insufficient inducement. Unfortunately, finding the failure of "European medicine" in effecting a rapid cure many became disheartened and resorted once more to the cautery and the bleeding cup.

The most notable single attack on the tuberculosis problem was provided from without. It was arranged for a Scandinavian B.C.G. team to visit the camp in November, 1949. All those between the ages of 1 and 18 were first of all tuberculin-tested (Moro patch test); all negative reactors were then vaccinated. In spite of the fairly large numbers of cases of tuberculosis encountered, it was surprising that only 13.5% of those tested in Jordan were positive.

During the subsequent 3 months it was disturbing to find several instances where indolent ulcers had developed at the site of inoculation, in some cases associated with a severe axillary adenitis. Frequently the latter broke down with the formation of caseous pus and a chronic discharging sinus. In all 37 such cases presented, all except 4 being three years old or under. Pus and curetted material was sent to Jerusalem for bacteriological examination but in none were any tubercle bacilli identified.

As a result of this untoward effect of the B.C.G. vaccine a survey was carried out among refugee children in the town of Amman by the medical officer in charge of the vaccination team. In all 1,348 vaccinated children were examined with the following results:-

Ulcerations bigger than 10 mm. diameter in the left shoulder	20
Abscess in the left shoulder	6
Abscess in the left axilla	<u>9</u>
Total:	35

The number of complications was therefore 2.6% of the total number of children inspected.

The tuberculin test was repeated on these children and of these 1,007 reported again in order to show the result of the test, which was as follows:-

Positive reactors 923

Negative reactors 84

Percentage of positive reactors, therefore 91.7(Gæster, 1950)

Thus was demonstrated clearly the effect of the vaccine on hitherto negative reactors.

The untoward reactions noted correspond in type and degree of incidence to those recorded by the Scandinavian B.C.G. authorities (World Health Organization, 1950).

Diseases of the eye.

Second only to malaria, eye troubles were the greatest affliction of the refugees. Many of these had a basis of chronic trachoma, on which an acute conjunctivitis was superimposed or where the attendant ills of trichiasis and corneal ulceration had supervened.

Acute conjunctivitis was inevitably much worse during the summer months, when many, particularly children, were to be seen with swollen, bloodshot eyes, the pus rolling down their cheeks in dusty rivulets. The latter attracted swarms of flies, which undoubtedly played a major role in the dissemination of the disease; the other main factor being the persistent assault of the fine white, powdery dust. It was noticed, incidentally that the number of body lice became noticeably increased in December, 1949. This was ascribed to the weather becoming colder with

the result that more clothes were worn and less personal washing was carried out. There was however no noticeable increase in the incidence of trachoma concomitantly. It has been suggested that this disease is carried by lice (Neame and Williamson-Noble, 1948. Parsons and Duke-Elder, 1948), although Tabone (1951) considers that fomites are to be equally suspect.

It was found that there was a practice amongst the Arabs of removing foreign bodies from the eyeball with the tongue, a procedure also noted by Hilton-Simpson (1922).

A special department of the clinic was set aside for the treatment of eye conditions with a British nursing aide in charge. In August, 1949, the monthly attendance here was 7,588, but in the winter months this fell to the region of about 4,000 per month. During the hot, dusty weather several cases of myiasis occurred, necessitating the unpleasant task of removing the offending larvae from the conjunctival sac.

It is estimated that in the time of the British Mandatory Government of Palestine about 1% of the population were blind in both eyes and 2% in one eye (League of Red Cross Societies, 1950).

Iridocyclitis, cataract, primary and secondary glaucoma were all relatively common. Two cases of conjunctivitis were evidently of the diphtheritic type and therefore of some special interest.

Operative treatment.

Once each week about a dozen people were selected to be seen by an ophthalmic specialist and duly despatched to Salt Hospital, where, if necessary, operation was arranged.

Prevention.

This was tackled mainly by strenuous attempts to keep down the

fly population, by exhorting the people to attend early for treatment and by simple educational efforts such as the display of posters of the type shown in Fig. 14.

Dysentery group.

This group of diseases were the third most common type of illness. As has been already mentioned, laboratory facilities were negligible and diagnosis was effected for the most part on clinical grounds. In cases resistant to treatment with the sulphaguanidine type of drug, stools were examined for pathogenic amoebae, but on the whole amoebiasis constituted a very small proportion of the whole group.

For the sake of convenience, all acute diarrhoeas, including those of infancy, infective, dietetic and symptomatic are considered under this group. A special feeding centre for infants was instituted and was in constant operation in the charge of a British welfare worker, who had had special training in the care and feeding of children. A high proportion of these cases were found to be due to faulty feeding on the part of the mother and responded well to her careful supervision and tuition. In addition to infants, older children and others who required special feeding were dealt with at this centre. It was considered desirable that people who had been granted extra food on medical grounds should eat it under supervision rather than take it away where it would inevitably find its way on to the open market or into the stomachs of the stronger and healthier. In the treatment of infantile diarrhoeas three local remedies were found to be of some value in certain types and phases of the disease, these were "leban" (a local preparation of the sour milk variety), rice water and mashed bananas. Fortunately apparatus and suitable sterile preparations were available for intravenous therapy when required.

On the whole, this type of case responded better to treatment than almost any other and the mortality rate was not high.

From time to time a number of marasmic children were presented for treatment (see Fig. 11). While the general poor supplies of food obviously played a part, it was considered that a more important factor was faulty feeding, superimposed on a mild enteric infection and over-reliance on local "witchdoctors". With constant supervision at the infant feeding centre and a combination of coaxing and threats to the mother, some of these infants recovered.

Respiratory affections.

Following the outbreak of measles in September, and October, 1949, there was an aftermath of bronchopneumonia and acute otitis media. In the period 1st October to 10th November 126 cases of bronchopneumonia were followed up. The total number of cases of all types seen at the clinic during this period was 2,943. Of these cases of pneumonia only 6 were known to have died and 3 of these were moribund when first seen. Penicillin proved its value time and time again.

Relatively, lobar pneumonia was uncommon. Occasional cases occurred of pneumonia due to infestation with the larvae of *Ascaris lumbricoides*. Three cases of paraffin pneumonia (one of which was fatal) were encountered in children who had swallowed kerosens. (See Gelfand, 1949).

Bronchial asthma presented sporadically. A persistent tracheo-bronchitis was an accompaniment of the hot, dusty weather. Chronic bronchitis, bronchiectasis (see Fig. 9) and carcinoma of the lung were all encountered.

Ear, nose and throat diseases.

During the period 1st October to 10th November, mentioned above, 98 cases of acute otitis media were seen out of a total of 2,943 cases of all kinds. Nearly all of these responded well to chemotherapy and in addition minor surgery and local applications were all that were required.

There was always a number of cases of chronic suppurative otitis media and foreign bodies and insects requiring to be removed from the ear. Here too occasional cases of myiasis cropped up. Tonsillitis and peritonsillar abscess were quite common.

Smallpox.

In March, 1950, a small girl was discovered to be suffering from smallpox.

In the circumstances dictatorial methods were considered to be justified. Accordingly a police guard was immediately set over the tent and all coming and going forthwith prohibited. Without delay a list was at once compiled of all those in neighbouring tents and all likely contacts; these were afterwards sought out and vaccinated.

The other occupants were an elderly couple, the child's aunt and uncle, and her small cousin. On further enquiry it was learnt that the victim lived in a nearby town (Jericho) and was staying with these people while her mother was in the government hospital, where it was subsequently discovered that she was suffering from smallpox.

A small group of new tents were pitched in an isolated position on the outskirts of the camp, under police guard, and here the family were moved at an early opportunity. A boy was appointed to fetch and carry food and water.

The family of the infected girl and all contacts were vaccinated. Fortunately the infection was of an attenuated type, the patient made a good recovery, and there were no further cases.

Miscellaneous conditions.

Leprosy. 1 case only was seen, this was of the nodulo-cutaneous type. The patient was sent to the government hospital in Amman, but he subsequently returned to the camp. The Public Health authorities would apparently take no responsibility for either his supervision or treatment.

Bilharziasis. In all five cases of urinary infection with this organism were encountered. This has a very localised distribution in Palestine, occurring only in the Ramleh-Jaffa area where there are "sweet-water" canals. It was noted that except for 2 cases from Egypt, all had been formerly resident in this region.

Leishmaniasis. 2 cases of the cutaneous variety were seen; 1 case of visceral leishmaniasis was suspected but not confirmed.

Enteric fever. This occurred sporadically only, diagnosis was on clinical grounds, since laboratory facilities were usually not available.

Relapsing fever. Here again the incidence was sporadic. Such cases as there were were thought to be tickborne, due to *S. sogdianum*.

Syphilis. 3 cases of unmistakable congenital syphilis were seen and 3 of tertiary infection, but no primary lesions at all. Bejel, the non-venereal syphilis-like disease said to exist among bedouin Arabs did not occur or was not recognized.

Gingivitis. Chronic infections of the gums were extremely common. Much of this was thought to have an underlying basis of vitamin C deficiency, since in many cases the provision of vitamin C tablets alone produced a marked amelioration of the condition, other cases would seem

to be due to spirochaetal infection, since they cleared up rapidly after intravenous injection and local application of neocarsphenamine.

In general, experience coincides with that of Bussell (1950) who was working simultaneously in the northern part of Jordan. He says in addition that hysteria and neurosis are common but neurological disorders rare. Endocrine disease is almost unheard of, with the exception of diabetes mellitus. Peptic ulcer, he continues, is common, the interminable cups of black coffee being perhaps a predisposing factor. Cardiovascular diseases are relatively rare (except that associated with acute rheumatism).

Diseases due to animals and parasites.

Snakes and scorpions were a persistent source of trouble, fortunately there were plentiful supplies of the appropriate antisera. There were no fatalities.

Leech infestation in the throat and nasopharynx was met with (Cameron, 1950).

The commonest intestinal inhabitants were roundworms and tapeworms, hookworm infestation was rare.

Surgical conditions.

A great deal of minor surgery and occasionally emergency procedures were carried out in the camp.

The majority of those requiring operative treatment, however, were sent to the British Red Cross hospital at Es Salt, and the surgeon

from there visited the camp once each week for surgical consultations.

There were not many major surgical emergencies. Appendicitis was not diagnosed at all, there were a few cases of acute intestinal obstruction and one infant with intussusception. There were two cases only of perforated peptic ulcer, one of which died before admission to hospital.

Emergency traumatic surgery was carried out at intervals as a result of violence. Stab wounds, injuries from blunt objects and from a peculiarly vicious type of "knuckle-duster" (see Fig. 13), gunshot and blast wounds all occurred. A woman, murdered by being drenched in kerosene and ignited, presented a hopeless and ghastly task.

Obstetrical and gynaecological conditions.

Amenorrhoea, sterility and accidental abortion were frequently encountered. Malpresentations and malpositions were not uncommon but labour usually seemed such an easy process that little or no difficulty was usually experienced even with quite flagrant abnormalities. There was every evidence that criminal abortion was not practiced. No mothers were known to die in childbirth.

Amongst the more unusual cases was one of hydatidiform mole. The uterus was evacuated manually in the camp as an emergency and after plasma infusion and other restorative treatment the patient was moved to Salt Hospital where a total hysterectomy was carried out, the patient subsequently making a good recovery.



STILL'S DISEASE



BRONCHIECTASIS



SCROFULA

FIG. 9.

CLINICAL CASES

FIG. 10.

CLINICAL CASES

ATTENUATED
SMALLPOXUNTOWARD RESULTS
OF B.C.G. VACCINATION.ABSCESS FORMATION
AND
ULCERATION
IN THE IPSILATERAL
AXILLAE.



FIG. 11.

MARASMUS.

FIG. 12.



PSOAS ABSCESS



This baby was born prematurely by 2 months and successfully reared. When photographed the baby was apparently thriving, but 6 hours later was unwell and was found to be suffering from bronchitis. The mother was very angry and demanded immediate destruction of the photograph, since, she maintained, by it the Evil Eye had been put upon her child.

Notwithstanding, the child made a good recovery with chemotherapy and supportive treatment.

EVIL EYE.



FIG. 14. ANTI-FLY PROPAGANDA

POSTER. (U.N.R.P.R. - W.H.O.)

III. ORGANIZATION OF MEDICAL SERVICE.

Personnel.

During the entire period there was one British Medical Officer in the Camp, at intervals he was assisted at different times by an Arab and by a French Medical Officer. From January until May there were two British Medical Officers.

In addition there were usually either three or four trained nursing sisters and a similar number of nursing aides ("V.A.D.'s").

Finally there were two British welfare workers, one of whom was in charge of the infant and special feeding centre.

Of the trained sisters, one, who was senior, supervised the nursing side of the clinic and the training of Arab nursing orderlies. She also looked after the maternity department and (later) the camp hospital.

Another trained sister was in charge of the surgery, where all minor operations, injections and more complicated dressings were carried out.

The other sisters occupied their time by visiting sick people in the camp. Each was provided with at least one interpreter and usually at least one of them could be given motor transport.

Of the "V.A.D.'s", one was permanently in charge of the school children. Showerbaths had been constructed and all school children were required to attend for regular inspection and washing. The eye department and that dealing with general dressings, skin troubles and ear conditions occupied the remaining two "V.A.D.'s".

Mention may conveniently be made here of the one other European member of the Red Cross Staff in the camp, who, although non-medical, was responsible for the general administration of the camp and who thus worked hand in hand with the medical and welfare staff.

A partly qualified Arab dispenser was kept who was made responsible for medical and surgical materials under the close supervision of the Senior Medical Officer. A camp formulary was made out, based on the British National formulary and, although some of the dispensing was done by the medical officers, he was fully capable of dealing with the bulk of the work.

During working hours several hundred people would be attending the clinic, either for medical advice or for treatment and this necessitated an army of gatekeepers, nursing orderlies, messengers, water carriers and so on who were recruited from among the refugees and paid small wages.

One trained Arab midwife and one untrained assistant midwife were employed, who attended the majority of those in childbed.

Initially, dental extractions were carried out by the medical staff but subsequently it was arranged for a visiting dentist to come once each week.

Method of Working.

(a) Accommodation.

In Sukneh camp the centre was entirely tented. British Army tents about ten foot square were used. These were surrounded by barbed wire fences with gates which were manned by paid employees. This being to discourage stampedes and riots, which occurred frequently.

Before the move to El Karamah, the author was asked to draw up a plan for a permanent clinic to be built of mud bricks by the public works department of the Jordan government at the new camp site.

The buildings, however, took a long time to complete and the clinic remained in tents at El Karamah until February, 1950.

When the mud buildings were completed a small tented hospital was erected alongside the clinic. This consisted of two large tents each containing six beds for adults of each sex and one small tent adjoining the maternity department for infants, and, if necessary, for women "lying in". In addition there was another small tent for the duty nursing orderly and for use as a kitchen.

The clinic consisted of twelve rooms, each 4 metres square, very simply constructed. Running water was supplied to each room and a garden was planted in and around the clinic.

The main problem was to ensure a steady stream of traffic with no bottlenecks.

A plan of the Clinic at El Karamah is shown in Figure 13:-

(see over).

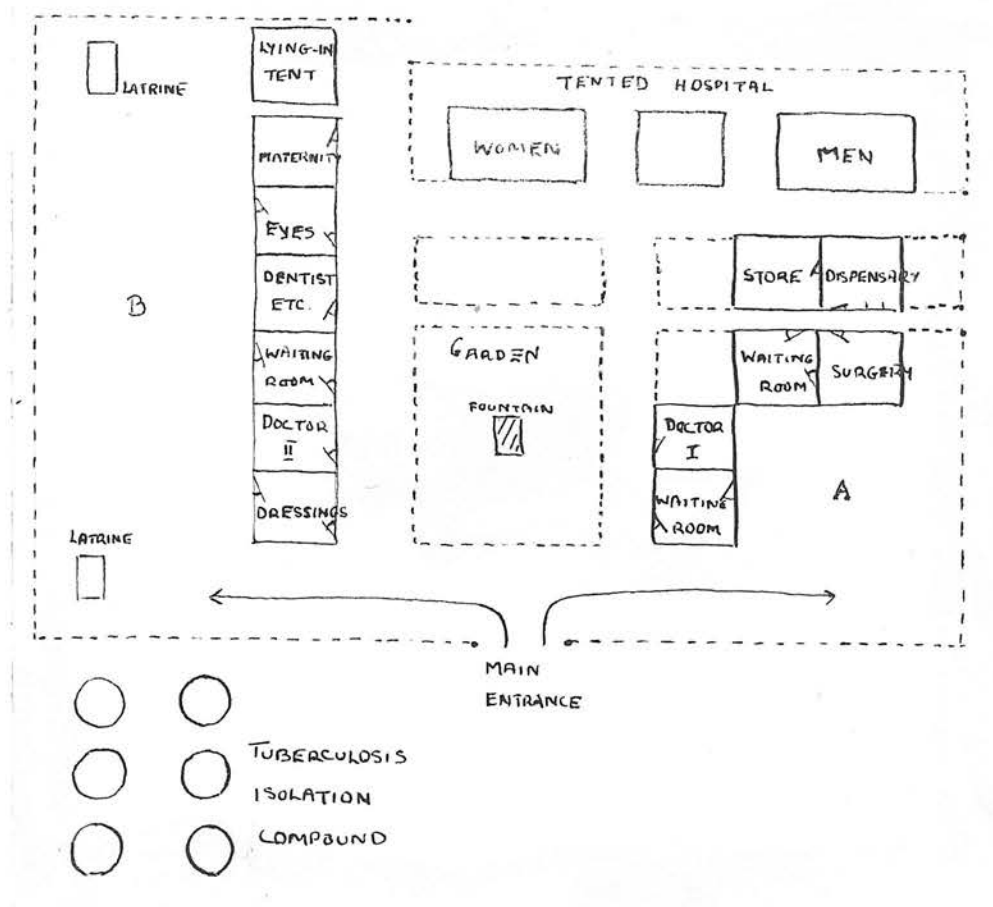


Figure 13.

It will be seen that there are one main entrance and three exits. For the sake of convenience the camp was divided up into six sections, according to the district of origin of the inhabitants in Palestine - Lydda, Jaffa, Ramleh, Jerusalem, Haifa and North Shuneh. While there were two doctors working in the clinic, each dealt with three sections. On entering the gate, therefore, those from Ramleh, Lydda or Jaffa districts wishing to see the doctor turned right, into Compound A. All others and all those for routine dressings, dental treatment, etc., turned to the left into Compound B, where they waited in a queue for the required attention, passing through the various rooms from West to East. Those in Compound A passed into the waiting room, thence to consulting room I and on and out of the main exit. Those requiring medicines paused

outside the pharmacy and handed the prescription to the dispenser through a hatch window, received their due and passed on. All floors were cemented and the walls whitewashed inside and out.

(b) Documentation.

Records were kept of attendance at all clinics. The name of each patient was entered in a ledger, along with the diagnosis, the treatment and when he was to report again.

The more serious cases had a case card on which was entered a brief history and details of investigation and treatment. These were indexed and filed.

A register of tuberculous persons was kept, and the names of those who were being referred for surgical or ophthalmic specialist advice were also entered in separate books.

A table follows indicating the attendance at the various departments month by month, during the period under review:-

	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.
Doctors Consultations (Clinic)	2498	2242	2439	2711	2690	2690	2618
General Dressings	4724	3727	2798	3033	4299	3023	4587
Eye Department	4760	3999	2350	2491	3846	4331	3831
Dental	204	259	100	150	176	127	78
Minor Surgery	37	46	60	59	46	56	59
School Clinic	1530	3582			4790	2088	1940
Confinements	27	58	65	50	31	35	53
Antenatal Clinic	8	25	7	39	55	101	93
Camp Visits (Nurses) (First visits only)	714		683	655	713	740	569

In general, owing to pressure of clinical work, the Medical Officer's camp visits were seldom recorded nor were those seen by him in the evening. First visits only to sick people in the camp were recorded by the Nurses.

Each Medical Officer had a personal clerk and interpreter recruited from the refugees, but latterly sufficient knowledge of the language was gained to manage without an interpreter in an extremity.

A dozen or more nursing orderlies were trained by the British Staff and three at least became extremely capable and efficient nurses.

(c) Medical Supplies and Equipment.

The majority of medical and surgical materials used were purchased from British Red Cross funds, one large consignment coming from the British Forces in Egypt. In addition a considerable quantity was obtained from the headquarters of the League of Red Cross Societies in Beirut.

Each fortnight an indent was submitted to the headquarters of the British Red Cross Commission in Amman and supplies drawn according to existing stocks. A similar indent was made each month to the Beirut headquarters.

On the whole the supply of drugs and medicines was adequate for almost all purposes. Initially the supply of penicillin and sulphonamide drugs was insufficient but with firm pressure this improved later. Occasionally it was necessary to purchase certain specific drugs from local dealers, particularly in emergency.

Large quantities of gauze, wool, bandages and antiseptics were used and although there was usually just sufficient a fairly rigid economy was required.

A microscope was loaned by the American University of Beirut, for the duration of the operation.

There was a good selection of medical and surgical instruments. The sterilizers were heated by means of pressure stoves.

All furniture except beds was made in the camp by the refugees and was rough but entirely adequate. Lighting was provided by kerosene pressure lamps.

(d) Transport.

This consisted of a saloon car and a 15 cwt. Chevrolet truck. Occasionally a Jeep was available and latterly an ancient and very cumbersome ambulance was added.

The ground was very rough and the saloon car could not be used for getting about the camp, only for road journeys. Fortunately, it was possible to keep two horses.

(e) Laboratory Facilities.

These were almost non-existent. The government laboratory in Amman was found to be quite unreliable. Latterly the Swiss opened a laboratory in Jerusalem to which a few specimens were sent. A few simple tests could be carried out in the camp with such reagents as were available and the aid of the microscope.

Hygiene and Preventive Medicine.

1) Labour.

A squad of 32 labourers under 4 foremen was employed to keep the camp clean and in good order. Of these, 9 were employed on maintaining the latrines and the remainder occupied their time in scavenging, dumping rubbish, digging drains and spraying tents and buildings with insecticides.

2) Disposal of Refuse.

Pits were constructed round the perimeter of the camp where rubbish

was dumped, sprayed and subsequently buried. A certain amount of rubbish was conveyed into a secluded spot in the hills and dumped there.

Incinerators were also constructed and were in daily use. Large garbage bins were placed throughout the camp.

3) Latrines.

These were all of the deep trench type. At Sukneh there were 56 blocks of latrines, each of 9 units, at El Karameh 42 blocks, each of 9 units. Each unit was floored by a concrete slab with a central aperture. The superstructure of the latrine was made of corrugated iron, with a roof and door.

4) Water.

At Sukneh this was pumped up from the river Zerka which was clear and pure.

At El Karameh the water was derived from deep wells and was also of good quality except that it had rather a high percentage of minerals and in consequence a slight flavour. Samples of water were submitted from time to time for analysis but nothing abnormal ever found.

5) Meat inspection.

Lightning and unheralded inspections of the meat on sale in the market were made from time to time. Usually the meat was of good quality. Any purveyors of bad meat were warned or punished. It was made compulsory to cover the meat with muslin to keep away the flies. An abattoir was built both at Sukneh and El Karameh and it was made illegal to slaughter animals elsewhere than here. It was kept clean and all refuse was quickly removed and buried.

6) Anti-louse procedure.

All school children at the clinic were sprayed with D.D.T. powder

after washing. Anyone who presented themselves at the clinic in a lousy condition was immediately sprayed with D.D.T. and a squad dispatched at once to do the same to the remainder of their possessions and relatives. In general, the spraying of the tents which was part of the anti-malaria and anti-fly campaign also kept down the lice.

7) Anti-malaria and anti-fly campaign.

Both Sukneh and El Karameh were known to be highly malarious areas.

At Sukneh the chief vector was known to be *Anopheles Superpictus* and several specimens were caught and identified. Curiously enough, considering the terrain, the previous medical officer had apprehended specimens of *A. turkhudi*, *A. pharoensis* and *A. multicolor* there. (Draper, 1950) Every tent in the camp, all buildings, and all houses in the village of Sukneh were sprayed with a mixture of $2\frac{1}{2}\%$ D.D.T. and $2\frac{1}{2}\%$ gammexane. Caves in the hills round about and neighbouring bedouin tents all came in for the same attention. A watchful eye was kept on all possible breeding places and static water, where it could not be drained away, was sprayed with an emulsion containing malariol and 5% D.D.T.

After the move to El Karameh the process of spraying was repeated.

The camp was visited twice by a malariologist on the staff of W.H.O., who gave it as his opinion that the measures had been most effective (Craig, 1950). As a criterion of fresh infection he examined the blood of a number of infants up to the age of 9 months but could find no malaria parasites. In addition there was a conspicuous absence of mosquitoes from sprayed buildings and tents and only few larvae were found in surrounding breeding places.

The effect of the D.D.T. spraying on the flies was not so marked

nor so lasting. In March, 1950, all latrines, garbage pits and other potential breeding centres were sprayed with .2% gamma isomer liquid concentrate of Gammexane in heavy solar oil. This proved a most useful measure.

An attempt was made to provide elementary education in matters of hygiene by addressing convocations of Mukhtars and by the display of posters, such as that shown in Fig. 14.

8) Inoculation and vaccination.

During the period under consideration widespread inoculation campaigns against the typhoid-paratyphoid group and against diphtheria were carried out. A large number of people had already been vaccinated against smallpox both by the Red Cross in the earlier phase of the operation and in previous years by the Palestine Health Department. Whooping cough prophylaxis was also carried out in a small number of cases, the bulk of the available vaccine being used therapeutically in established cases. Reference has already been made to the B.C.G. campaign.

Diphtheria.

A large quantity of A.P.T. (Burroughs Wellcome) was made available for diphtheria immunization.

All children attending school (about 3,000) received one inoculation but only 1,570 attended for the second inoculation, the remainder defaulted. The dose given was .5 c.c. for those under 1 year old and .2 c.c. for those of one year and upwards. It was considered desirable only to inoculate those at school where there was a definite record of the name and age and the children could be taken systematically class by class. Many of the people consider injections (of whatever variety) as a panacea of all ills



and it seemed likely that if the responsibility were left to the mother that some children might be thrust forward for injection on several occasions, particularly ill children, or that they might be brought for the second injection long before the requisite four weeks had elapsed. The craze for injections among these people was a continual problem and many tried by fair means or foul to get "injections" (of any kind) for themselves or their offspring.

Typhoid-paratyphoid.

A large number of T.A.B. inoculations had been carried out in 1949, during the months July and August. During March and April of 1950 the campaign was re-opened. Extensive propaganda was issued but in spite of this only 4,439 people submitted to the needle. These were all given a single booster dose.

Vaccination.

Smallpox vaccination was also recommenced on a large scale in March and April, 1950. 2,428 school children were vaccinated with about 50% of positive results and in all about 100 infants received their first vaccinations. The occurrence of one case of smallpox in the camp stimulated interest in vaccination for a short time. All traceable contacts and all those in surrounding tents were vaccinated, as also were non-European medical staff and police who were connected with the case.

Before starting an immunization campaign a meeting of the Mukhtars (village headmen) was called and addressed by the medical officer. This always brought great shows of politeness and enthusiasm, but it is rather in the nature of the Arab for such feelings to wane quickly and so, unfortunately, they did. The words of encouragement or explanation were

seldom, if ever, transmitted to their people, as was the intention.

Before the B.C.G. campaign duplicated notes of explanation in Arabic were issued and distributed throughout the camp.

9) The School.

Of some 8,000 children in the camp about 3,000 were fortunate enough to be able to attend the camp school. Here their minds and bodies were employed and to some extent disciplined. It was a most popular institution and played a great part in cutting down the mischief which goes hand in hand with idleness. The school was staffed by Arab refugee teachers, paid small wages out of funds supplied by the Red Cross and by UNESCO, from which sources also came books and writing materials.

Every child was provided with a meal at school everyday.

It has already been mentioned that regular cleansing was compulsory and during the course of the month the nurse on duty at the school worked her way systematically through nearly all the children, class by class; scrubbing with soap and hot water, supervising the shower-baths, cutting and clipping the hair of the boys, combing the hair of the girls, washing clothing and dusting with D.D.T. powder where necessary. At the same time a careful watch was kept for skin troubles or infectious diseases and in this way a valuable check was kept on their general health. The school children always contrived to look well and happy and clean.

Towards the end of the period a general survey of the school children was started. Owing to various circumstances it had to be abandoned but before this a total of sixty-six schoolgirls was inspected. Of these sixty-six all but three were considered to be of average or above

average build and development. Nineteen had bleeding gums, some of these gums were spongy and showed the characteristic budding of incipient scurvy. Eleven had a mild gingivitis superimposed and seven only had one or more carious teeth. Thirty-one had a mild hypertrophy of the tonsils. One only had a palpably enlarged spleen.

10) Rehabilitation.

It was considered that one of the most urgent needs was for employment of the many idle hands. Idleness breeds introspection and introspection, besides swelling the sick queue, breeds gossip and discontent. It was in this way that the school proved such a factor for good. On the whole it was difficult to get the people to work voluntarily for the good of the community for nothing. All labourers, clerks and medical orderlies had to be paid small salaries out of Red Cross funds. This helped to spread a little money through the Camp, so that many people could supplement their rations to a small extent. In addition, a number of people such as potters, carpenters, and barbers plied their trade and made a small steady income. Small gardens were cultivated round the tents and vegetables of various sorts were grown. There was quite an extensive market in the camp where food of all sorts and cheap household articles were for sale. The welfare department ran sewing circles and a little weaving was done. On the whole though there were very few handicrafts practised in the camp.

The position improved immensely when the camp was set up again in El Karamah. With very little delay a large acreage had been ploughed up and planted. Tools, seeds and allotments of land were distributed free to all who wanted them. Irrigation schemes were started.

Later the Jordan government began to employ a number of labourers from the camp on road-building and other operations.

With these enterprises under way there was a noticeable improvement in the general morale and an appreciable diminution in the numbers of the sick queue.

11) Nutrition.

Basic dry rations were issued daily by the Red Cross. During the month of November, 1949, one daily ration per refugee was as follows:-

	Quantity Grams	Calories	Carbohydrate Grams	Protein Grams	Fat Grams
Flour	325.0	1105	243.8	32.5	3.90
Lentils	22.7	79	13.0	5.00	0.45
Rice	15.0	52.5	12.0	1.00	-
Cooking oil	13.0	117	-	-	13.0
Sugar	6.5	26	6.5	-	-
Tinned Fish	1.7	6	-	.30	0.4
Dried Fruit	1.3.	3.5.	.8	.06	-
TOTAL		1389	276.1	38.86	17.75

(League of Red Cross Societies, 1950)

Rations were issued for a whole month at a time. They varied a little from month to month, for instance margarine was substituted for cooking oil on occasions, and there were additional issues of tinned potatoes, dried beans, and raisins.

It will at once be apparent that a daily diet of 1,389 calories is insufficient for an adult, even when living a completely sedentary

existence. In addition the diet is poorly balanced, being top heavy in carbohydrate and low in protein and fat.

It should be mentioned here that, over and above the basic rations, reconstituted dried milk was issued to all children, pregnant women and nursing mothers. Every infant up to 1 year old received 500 c.c. of whole milk and all children up to 15 years, pregnant women and nursing mothers received 400 c.c. of skimmed milk.

It should be borne in mind that the daily ration was given to all, regardless of age, and as most families had small children whose needs were correspondingly less, most adults received a considerably larger share. In addition, as has already been mentioned all children attending school received a daily meal.

The basic diet would also appear to be low in all the vitamins, particularly in Vitamin A, riboflavine, Vitamin C and Vitamin D.

And yet, apart from the gingivitis and bleeding gums already noted there was certainly no frank deficiency disease to be found. Two mild cases of rickets and one case of tetany were encountered, as was also one case of melaena neonatorum. Iron deficiency anaemia was fairly common but was by no means widespread and was usually associated with chronic malaria. The basic daily diet probably provided about 10 mgm a day, sufficient for all except women in the child bearing age. More rarely macrocytic anaemia occurred which responded well to injections of liver extract and preparations containing iron. Large stocks of ascorbic acid tablets were accumulated and distribution made from time to time at the school with the school meals. In addition all cases of gingivitis or oral sepsis received ascorbic acid tablets during treatment and most of those attending the special feeding centre received them with their meals.

During February and March, 1950, all children under the age of 15 received 300 gm of Cod Liver Oil in addition to the rations.

This was available in fairly good supplies and was also issued to all who required "building up" and routinely to all the tuberculous.

To ensure that the school children took the Cod Liver Oil it was distributed under supervision. In some cases it was added to the food where the flavour would be well disguised.

Mild cases of glossitis occurred sporadically. No specific cause was found for these, they were usually treated with preparations containing Vitamin B₂ complex and usually recovered with little delay.

The basic rations were supplemented by other foodstuffs which were procured by the people in different ways. Many of them had probably still a few savings left which they had brought with them, others had goods which they were able to barter for food. In some cases where perhaps a family held ration cards in excess of their actual numbers or where there were a large number of young children they accumulated a surplus of the basic dry rations, these then could be bartered with local traders for fresh food. In some cases the blankets, clothing and other comforts distributed by the Red Cross were bartered in the same way. Many families had one or more wage owners which eased their problem considerably, others kept poultry and goats and cultivated small vegetable gardens which all helped to eke out their meagre fare. After the agricultural project was started in El Karameh the flow of fresh vegetables into the camp increased considerably. A few enterprising fishermen managed to extract a little first class protein from the River Jordan. In these ways the people managed to survive and

indeed to thrive. There were no serious signs of under-nourishment except in a few isolated cases which were sought out and cared for by the welfare department. In theory, at any rate, there were not enough vitamins to go round, all that could be done was to inject them at intervals where they would be most useful.

12) The Maternity Service.

Reference has already been made to the birthrate, which varied between about 20 and 65 deliveries a month. A trained Palestinian midwife was employed with an untrained assistant. Initially the women were attended by these two in the camp, but in October, 1949 a maternity department was instituted at the clinic and thereafter all were transported thither where they were delivered. Following the birth most women wished to return to their tents and most were permitted to do so. For those who wished to remain or those who required to be kept under observation an adjacent tent was set aside, together with camp beds and home-made wicker cribs for the babies. Antenatal clinics were initiated and all prospective mothers invited to attend. At first few came but latterly the numbers improved, particularly as it was made a condition of the special issue of milk to pregnant women that they should attend the antenatal clinic at least once.

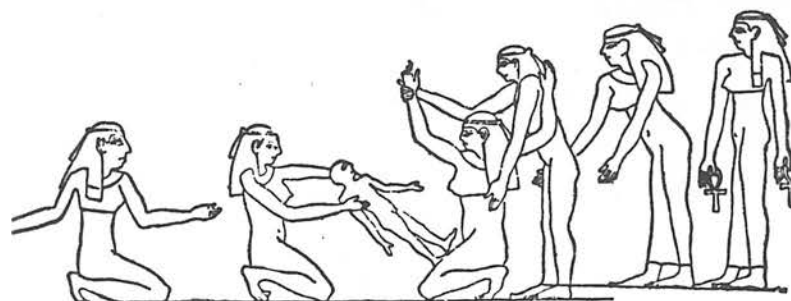
As it happened very little abnormality was found at these clinics and the great majority of the women appeared eminently fit for childbirth, which usually was an easy procedure compared with that of many British women.

During the whole period there was no maternal fatality from childbirth encountered either before, after or during the event. Three stillbirths

were recorded, one of which was an anencephalic foetus, and one being born with the cord tightly wound round the neck. Two cases of blue asphyxia both recovered with prompt restorative treatment. From time to time malpositions and presentations of the foetus were encountered but simple obstetrical remedies always sufficed.

One of the British Sisters, trained in maternity work, supervised the centre and it was found necessary to keep a careful eye on the aseptic technique of the Arab midwife, who in other respects did her job well.

It was noted that in parturition several of the women adopted a squatting attitude, leaning slightly forward on the knees, body upright and the arms supported by a relative. Identical in fact with that depicted in bas-relief on the temple of Esneh in Egypt, showing Cleopatra giving birth to a son. A copy of this is shown in Fig. 15 (after Haggard, 1929). Campbell (1926) quotes the Arabian physician Rhazes who describes the obstetric posture now known as "Walchers' position".



BIRTH OF CLEOPATRA'S CHILD

Fig. 15. From a bas-relief on the Temple of Esneh (from Haggard, 1929).

The position taken by Cleopatra during childbirth is similar to that adopted by some of the Arabs of Palestine.

SECTION B.

THE MANNERS AND CUSTOMS OF THE ARAB REFUGEE.

1. The teaching of the Koran.

The great majority of the people in the El Karameh camp had been ordinary peasants, artisans and labourers of the Moslem faith. Thus they differed only in their special status as refugees, and in the possession of a few local customs and traditions, from other Moslem Arabs in those strata of society.

In ancient Arabia, as in all primitive societies the original social unit was not the individual but the group. Within the group the members were bound together by the firm ties of blood kinship. The family supported its members, claimed their rights, avenged their injuries and answered for their crimes. The only authority for this custom being immemorial practice.

The advent of Islam preserved the old order in many ways but substituted bonds of common faith for bonds of blood and henceforward man is reckoned as an individual, as the imago of personal life emerges from the chrysalis of collectivity.

To these people Mahomet brought the awakenings of a social conscience. Their pagan hearts were brought to heel under the banner of one God. Strict rules were issued covering the least detail in the conduct of their lives, not only in matters of religion but in those of food and drink, marriage and divorce. Moslems are essentially equal among themselves and mutual aid is their legal duty.

The principle of unity in social order is vested in Allah. He is the civitas - the state - the supreme power in the common interest.

From birth to death man is alone under the eye of God, whom nothing escapes and to whose mercy man completely surrenders himself.

The Koran is the key to nine tenths of the average Moslem's outlook on life, to his moral code and the evolution of his social science.

Rodwell (1876) in the preface to his translation of the Koran speaks of the tremendous power which the teaching embodied in the book had on the followers of the new faith.

"It is due to the Koran that the occupants in the 6th Century of an arid peninsula whose poverty was only equalled by their ignorance, become not only the fervent and sincere votaries of a new creed, but, like Amru and many more, its warlike propagators.

Impelled possibly by drought and famine, actuated partly by desire of conquest, partly by religious conviction, they had conquered Persia in the 7th Century, the northern coasts of Africa and a large portion of Spain in the 8th, the Punjab and nearly the whole of India in the 9th. The simple shepherds and wandering bedouins of Arabia are transformed, as if by a magician's wand

..... And thus, while the Koran, which underlays this vast energy and contains the principles which are its springs of action, reflects to a great extent the mixed character of its author, its merits as a code of laws, and as a system of religious teaching, must always be estimated by the changes which it introduced into the customs and beliefs of those who willingly or by compulsion embraced it. In the suppression of their idolatries, in the substitution of the worship of Allah for that of the powers of nature and genii (Djinn or jân) with Him, in the abolition of

child murder, in the extinction of manifold superstitious usages, in the reduction of the number of wives to a fixed standard, it was to the Arabians an unquestionable blessing"

Here we are not concerned so much with purely religious dogma and practice, but we are concerned with the manners, customs and laws of Arab society. It will thus be seen what a tremendous influence the teaching of the Koran had in welding together these wild warring people and in the development of their present day social structure. To us law derives its authority from the reason and will of man and his moral nature. To the Moslem, law is different for it is nothing less than the will of Allah and submission to His law is not only a social duty but a precept of the only true faith.

But the law of Islam takes cognizance of the weakness and frailty of man and the practical necessities of life. The true believer should enjoy Gods "good things" but must obey the precepts laid down in the Koran. Liberty is the keynote of the law but owing to the shortcomings of human nature liberty cannot be unlimited. Man is at once greedy, ungrateful, covetous, niggardly and slothful. Moslem law restrains human action and man's primitive liberty to the benefit of the individual and society.

Religion and law are parallel and complementary their common end being the welfare of man.

It is pointed out by de Santillana (1931) that there is in the Arab view a strong Hellenic influence. For instance, he quotes the Durr-al-Mukhtar "Man is by nature a political animal, because he cannot live by himself as other animals do, but requires the help and society of fellow creatures".

The system of rules comprising every part of a Moslem's life from the humblest details up to the principles of his moral and social existence, is termed the straight way, "Shariah", and must be followed by every believer.

2. Nurture and Upbringing.

From the time shortly after birth when the father whispers the Moslem call to prayer in the baby's left ear, the Arab child becomes at once the target of his parents' pride and affection.

Children are counted a great blessing, particularly males, and barrenness is a reproach and cause for shame. The estimation in which a wife is held by her husband and even by her acquaintances depends in a great degree on her fruitfulness.

Immediately after birth the infant may be sprinkled with salt and rubbed with olive oil. This, however, was not commonly carried out in the camp owing to the scarcity of these commodities.

The infant is swathed in a length of cloth and trussed up firmly for a period of forty days. Breast feeding starts without delay and may be continued, especially with boys, until he is over two years old. Moslem law forbids weaning until the age of two unless with the consent of the husband which is generally given after about a year to eighteen months (Lane, 1836). If the mother has a poor supply of milk she will hang a white bead over her bosom. If this fails she will consult a "wise woman" or be taken under the supervision of her husband to see a "wise man" (Hakim).

The education of the child is founded on the Koran and long

passages are learnt by heart and recited repeatedly. As he slowly becomes imbued with the outlook and teaching of the Prophet so the Arab develops his proverbial fatalistic attitude towards life.

3. Food.

As the child grows it will be fed daily on the habitual unleavened bread, leban (a sour milk preparation similar to yoghurt), usually a little meat or egg, chopped vegetables or salad, and rice. Much of the food is heavy, greasy and well spiced. Sweets are popular. In the Summer water melons are widely consumed. Later, in the Autumn, oranges are available, but are on the whole beyond the means of most refugees.

The Koran lays down certain rules about food (Sura V. Verse 4).

"That which dieth of itself, and blood, and swine's flesh, and all that hath been sacrificed under the invocation of any other name than that of God, and the strangled, and the killed by a blow, or by a fall, or by goring, and that which hath been eaten by beasts of prey, unless ye make it clean by giving the death-stroke yourselves, and that which hath been sacrificed on blocks of stone, is forbidden you".

An animal which is killed for the food of man must be killed in a certain manner, the throat being cut next the head, care being taken to divide the carotid arteries and the windpipe. (Lane, 1836).

Alcohol in any form is also prohibited.

"They will ask thee concerning wine and games of chance.

SAY: In both is great sin, and advantage also, to men; but their sin is greater than their advantage". (Koran, Sura II. V.216). Actually this is one of the rules most frequently broken by Moslems and a number

partake of both wines and spirits, particularly among the upper classes.

Incidentally, unlimited wine is promised in paradise.

Amongst certain tribes or communities custom forbids the boiling of milk, as described by Frazer (1923).

The more wealthy Arabs disdain food obtained in the common market and prefer to produce it themselves, saying that that which has been openly displayed will lose virtue by the effect of the evil eyes of certain people in the market.

Coffee is consumed in great quantities by all, usually as a necessary accompaniment of social intercourse.

4. Circumcision.

All Arab boys must be circumcised and in some countries (e.g. Egypt) in the upper classes this is attended by lengthy ceremonies. In the camp at El Karameh the operation was performed rather perfunctorily by barbers, hakims and wandering quacks who took little or no precautions against sepsis.

5. Marriage and divorce.

Being polygynous the Arabs are, broadly speaking, less socially mature than Europeans.

On this point the Koran says (Sura IV. V.3) "...of other women who seem good in your eyes marry but two, or three, or four; and if ye still fear that ye shall not act equitably, then one only ..."

Before marriage can take place a sum of money has to be paid by the prospective husband to his future father-in-law. Divorce is a very easy matter and no justification for his action is required of a husband.

A divorced woman may, however, claim her "marriage fee" from her father, which thus gives her some little security. Amongst the refugees this rule was in many cases dispensed with or a nominal sum only paid on account of the general condition of poverty.

As with other Asiatics, the "small family" system favoured by Europeans has not caught on. (Carr-Saunders, 1936). As children are counted such a blessing it would also seem highly unlikely that birth control measures could be readily introduced. Indeed the instructions in the Koran about infanticide would seem also to be an indictment of birth control. (Sura VI. v. 142. tr. Sale).

"Losers are they who kill their children foolishly, without knowledge, and who prohibit what God has bestowed upon them, forging a lie against God, they have erred and are not guided".

Repeated investigation failed to reveal any cases of criminal abortion among the refugees and indeed all evidence suggested that such a procedure was unthinkable among true Moslems.

A case was encountered where an Arab woman was found to be pregnant and suffering from a marked degree of mitral stenosis. A combination of untoward circumstances precipitated at five months an attack of acute heart failure. Great pressure was brought to bear on both the patient and her husband to have the pregnancy terminated after the heart failure had been controlled. The patient herself was prepared to undergo this but the husband was adamant in his refusal. Actually the delivery took place at term without any undue distress to the mother whatsoever.

On the other hand Hilton-Simpson (1922) records that among the Shawirza of N. Africa certain abortive practices are employed for women so deformed that normal birth is impossible, but such practice would seem

to be unthinkable to any God fearing Palestinian.

Among the majority of the Arab refugees under our care a view of the utmost gravity was taken of an unmarried girl who became a mother. Such an eventuality was regarded as a great shame upon the family and invariably meant the murder of the girl at the hands of her father or brothers.

This also was no doubt responsible for the low incidence of venereal disease.

The only case of this sort encountered was that of a girl of 15, unmarried, who was the daughter of a man employed in the clinic as a cleaner. Pregnancy was diagnosed and an excuse was made that she required treatment at a British Red Cross Hospital at Irbid in Northern Jordan. Here she was dispatched, her child was born and arrangements made for it to be adopted. When all was over she returned to the camp and nothing further was said.

6. The Census.

Reference has already been made to the objections of the Arab refugee to the taking of a census in case false registrations and deaths are discovered, which would lead to a cut in the family rations.

A more fundamental objection to the taking of a census does however exist which has its roots deeply embedded in the past and is of a purely superstitious nature.

In the Books of Samuel and Chronicles two well-known narratives appear which indicate that at this time Jehovah cherished a singular antipathy to the taking of a census. King David, we read, was inspired with the unhappy idea of counting his people. The result, however, was

disastrous and the numbering of the people was immediately followed by a great pestilence and popular opinion viewed the calamity as a righteous retribution for the sin of the census. Frazer (1923) quotes this story and shows subsequently that this superstition is common to many people in diverse lands.

He assumes that the objection which the people of Palestine felt in King David's time to the taking of a census rested on no firmer foundation than sheer superstition, which may have been confirmed by an outbreak of plague immediately after the numbering of the people. To this day, he says, the same repugnance to count or be counted appears to linger among the Arabs of Syria, for we are told that an Arab is averse to counting the tents or horsemen, or cattle of his tribe, lest some misfortune befall them.

7. The Evil Eye.

Elworthy (1895) says:-

"The belief that there is a power of evil working which is ejaculated (as Bacon says) upon any object it beholds has existed in all times and in all countries. It was adopted and sanctioned alike by the Fathers of the Church, by mediaeval physicians and all writers on occult science, while in our own day it still exists among all savage nations, and even here in England is in our very midst".

Among the Arabs of Palestine and indeed among nearly all peoples of the Near East this superstition holds powerful sway, even among the more enlightened and educated people.

Children, especially male children, are said to be particularly sensitive to the Eye of Envy; likewise certain animals, particularly

horses and camels. To praise or admire a child or a horse is to court displeasure. The object of your admiration (it is said) will certainly fall sick or succumb to some other misfortune. In certain circumstances such expression of admiration is permissible if it is prefaced by a formula such as "Not my eye but the eye of the Prophet". Lane (1836) stated that in his day it was common custom of the people of Egypt, when admiring a child, to say "I seek refuge with the Lord of the Daybreak for thee" : (the 113th Sura of the Koran; in the end of which, protection is implored against the mischief of the envious).

The eyes of the unmarried or childless woman are considered the most virulent, and blue eyes the worst of all.

During the periods when the people were being inoculated or vaccinated it was noted that several old women painted the likeness of an eye on the arm which was bared to receive the needle prick. They were evidently quite willing and even anxious to receive the inoculation but mistrusted the additional effects of strange eyes on their bare skin.

The camera is also held by some to be highly detrimental and some mothers would object strongly to their offspring being photographed.

Case note.

In Fig. 12 a mother is shown with her infant. The child was born prematurely by two months. It was successfully reared and at the time the photograph was taken was thriving. The photograph, showing the mother and the baby being held by one of the Palestinian nursing aides was taken by one of the British Sisters, with the permission of the mother. By a curious coincidence the same evening the baby began to cough and vomit. The mother, in a frenzy, accused the nursing sister of putting the evil eye on the child. A diagnosis of acute bronchitis was made and with

suitable treatment full recovery was effected within three or four days.

Ill effects of the Evil Eye.

Any illness may be ascribed to this so-called noxe. But in particular affections of the eyes are said to be the most usual result. Eye troubles are of course rife in the Middle East and the peasant, knowing nothing of viruses or the inclusion bodies of trachoma prefers to ascribe these misfortunes to this rooted superstition. Blackman (1948) says that fretfulness on the part of an infant after a visitor has been to the tent is regarded as an early sign that all is not well.

Prophylactic Measures.

The principal means of avoiding this evil is in the wearing of certain amulets and charms. These include blue beads, cowrie shells, charms bearing a likeness of the human eye, and little blue hands. Triangular lumps of alum have special protective properties and these are frequently seen dangling from a child's cap. Other talismans are in the form of triangular purses or locketts containing certain appropriate texts from the Koran. The texts most commonly found are Sura 113 and 114 which run as follows (Rodwell's translation, 1861) :-

Sura 113.

SAY: I betake me for refuge to the Lord of the DAYBREAK
 Against the mischiefs of his creation;
 And against the mischief of the Night when it overtaketh me;
 And against the mischief of weird women;
 And against the mischief of the envier when he envieth.

Sura 114.

SAY: I betake me for refuge to the Lord of MEN,
 The King of men,
 The God of men,
 Against the mischief of the stealthily withdrawing whisperer,
 Who whispereth in man's breast -
 Against djinn and men.

Examples of these charms are shown in Fig. 17. Sprigs of rue are also considered to have some potency in this respect.

If a mother is in a public place with her infant and she suspects someone at hand of possessing the evil eye she will at once cover the child's face with her shawl.

In some cases recourse is had to elaborate subterfuges. As an instance of this a child will be deliberately kept in a dirty and unkempt condition, not from lack of parental affection but in order to ensure that it is not likely to be the object of admiration. This is mentioned by Lane (1836) and also by Blackman (1948). In other instances a male child may actually be brought up as a girl until the age of say ten or eleven. He will be dressed in girls' clothes and his hair will not be shorn although he will attend school with other boys.

Treatment.

Many elaborate rituals are carried out when once it is established that a child is the victim of an envious glance.

Case Note.

The wife of the Assistant Camp Commandant, a Christian Arab of some education, formerly employed by the British mandatory government of Palestine was the mother of eight daughters and two sons. After the visit

of a number of people to her tent she noticed that her younger son was very fretful and without more ado obtained a lump of alum which she melted in the fire. As it cooled it attained a certain shape which she maintained was characteristic of the profile of a certain person, who must therefore be the bearer of the evil eye. She then went out with a handful of salt until she caught sight of the suspect and followed him at a distance, sprinkling salt in his footsteps. The following day the child was perfectly well.

Examples of these rituals are frequently encountered and no purpose is served by describing any more. Lane (1836) and Blackman (1948) give accounts of several such procedures.

Suggested Explanation.

It is submitted that some part at least of the origin of these beliefs and practices is to be found in the magical laws of homoeopathy and contiguity (Frazer, 1922) in which primitive people believe.

Briefly these two laws are as follows:-

- I. That like produces like, or, in other words, that an effect resembles its cause.
- II. Things which have once been conjoined must remain for ever afterwards, even when quite dissevered from each other, in such a sympathetic relation that whatever is done to the one must similarly affect the other.

Both branches of magic may conveniently be comprehended under the general name of Sympathetic Magic, since both assume that things act on each other at a distance through a secret sympathy.

As an example of the former law there seems to be a marked significance in the wearing of an amulet representing an eye; though it

must be admitted that the purpose of many of the various little trinkets that are worn seems to be to deviate attention from the wearer's face (Lane, 1836). The predominant blue colour of the majority of these beads and amulets would also appear to be significant when it is remembered that blue eyes are considered generally as the most virulent of all.

As an example of the law of contagion Frazer (1922) mentions the world wide superstition that by injuring footprints you injure the feet that made them. This again reminds one of the Arab lady who sprinkled salt in the footsteps of the suspect bearer of the envious eye.

While we may not venture any nearer the truth than this, all Frazer's work does emphasize the strange fundamental identity of folk lore in all corners of the world.

MacLagan (1902) describes the great hold this superstition has on the inhabitants of the Western Highlands of Scotland. Among other remedies, salt is mentioned and coloured threads dipped in alum, which are hung round the neck. There is even a similarity between the formulae uttered in Scotland and in Arabia, for instance he quotes the following phrase (translated from the Gaelic) used before examining an animal:-

"May God bless the thing my eye is regarding".

Belief in this superstition can be traced back to past civilizations in remote antiquity. Among the treasures of Tutankhamen (1360 B.C.) are amulets depicting eyes similar to those worn nowadays in Egypt to protect the wearer against this evil influence.

In gaining his confidence and as a factor to be reckoned with in differential diagnosis, it is important to bear such matters in mind in dealing with a sick Arab.

8. The Djinn (jān).

The people of Palestine, Christian as well as Moslem, believe in the existence of a race of beings of pre-Adamite origin, called by the general name of "jān". Whilst the angels dwell in the heavens and have various offices and forms according to their respective abodes (those in the lowest heaven, for instance, being shaped like cows; those in the second, like falcons; in the third, like eagles; in the fourth, like horses, and so on), the jān are said by the learned to be created out of the fire of the "simūm" which they describe as a fire lacking both heat and smoke. They are said to dwell chiefly in or amongst the Jebel Kāf, the range of mountains which surrounds the earth.

Some of the jān are good Moslems, and do not injure their co-religionists, but the greater number of them are unclean infidels who take up their abode in rivers, fountains, cisterns, ruined buildings, baths, cellars, ovens, caves, sewers, and latrines. Such is the account given by Hanauer (1907). Some of them choose as dwellings cracks in the walls or under the doorsteps or thresholds of inhabited houses, so that it is very dangerous for people, especially females, to sit on a doorstep in the evening when these night-prowling evil spirits may do them grievous bodily injury. The jān are believed to be able to assume any shape they please and to change it at pleasure. Among the peasantry, there is current another story as to their origin. It is that our mother Eve (on whom be peace) used to bring forth forty children at a birth, but being unable to nurse more than half that number, she picked out the best 20 and threw the rest away. She told Adam on each occasion that she had borne only twenty, but he did not believe her. He therefore asked Allah to let any children she had thrown away live underground and

go abroad at night when all men sleep. Thus did they come into being.

These beings are said to be envious of men and women, and unless the formula "bismillah" ("in the name of God") is uttered before commencing any undertaking they will seek every opportunity for injuring them.

To the Arab it is of utmost importance to remember that "they" should always be treated with respect. On entering an empty room, a cellar, cave, or even when sweeping a room which has for some time stood empty one should say "dustur", thus asking permission.

Not only is it held foolhardy to sit on the doorstep or threshold of a house, especially about sunset, but it is dangerous to call any animal, even the smallest insect without at the same time pointing at the object, because many of the *jān* and other demons are named after animals and other things in nature, and should the name be used without the gesture, some jinni will think that he is called, and will take advantage of the mistake to harm the person calling him.

On the question of thresholds, Frazer (1923) points out that many people in diverse corners of the world believe that the threshold of a house is haunted by spirits.

Among the evil *jān* are the so-called "efreets" and of these the most powerful and deadly are the "marids". Yet another unpleasant being of this type is the "ghoul"; these are said to appear in the forms of certain animals and in many monstrous shapes; to haunt burial-grounds, and other sequestered spots; to feed upon dead bodies; and to kill and devour every human creature who has the misfortune to fall in their way.

The *jān* are supposed to be able to be responsible for any kind

of illness or misfortune but usually persons afflicted with them exhibit similar features to those described in the Bible as being "possessed of the devil".

Of a number of patients that were presented as being in the grip of a jinni most of them were consistent with a diagnosis of hysteria, two were almost certainly suffering from true epilepsy, one from senility and one from an unclassified maniacal state of indeterminate origin.

Interrogation of a learned sheikh revealed that a combination of the following clinical features were to be regarded as diagnostic of possession by a jinni - red eyes

painful, swollen joints, especially the elbow and knee joints
wild shouting

and a sensation by the patient of clutching round the neck.

Most patients, he maintained, would recover in a week with proper treatment. If at the end of this time they were not cured then treatment must be renewed and a cure could not be anticipated for forty days.

By way of treatment the patient should be confined (according to this sheikh) in a solitary room. He must be given certain passages from the Koran to ponder and recite. Further passages were to be hung round his neck, others to be written on paper and burned in his presence with incense and others still to be soaked in water, which was afterwards imbibed.

An additional treatment that was habitually practised by local "hakims" and others was to apply a cautery to each temple and to the nape of the neck. Occasionally more infamous modes of treatment are employed whereby the unhappy victims are suspended head downwards and flogged or are chained up in lonely caves with no food, no covering and a jar of water

only for sustenance (Bussell, 1950, Hanauer, 1907).

Case Note I.

A male refugee aged 22 who was employed in a neighbouring village as a labourer in a government engineering unit was sent for treatment because he had suddenly been smitten with deafness, dumbness, and loss of power in one leg.

The man appeared at the Clinic, unable to converse and dragging his right leg, but quite coherent and able to give a graphic account of the onset of his illness in writing.

It appeared that the previous day he had had a heated quarrel with his father over some domestic incident. That night there had been a very severe thunderstorm and as he was unable to sleep and the water was coming into the tent he had stood at the door of the tent (threshold) and had asked God to stop the storm. Whereupon a jinni in the form of a huge man, dressed in white, had struck him hard on the mouth and on the head causing him to fall back senseless into the tent. He remembered nothing more until morning when he awoke and found that he was deaf, dumb and unable properly to move one leg.

On examination no neurological abnormalities were found but he was discovered to have a temperature of 102° and a palpable spleen. A blood film revealed the ring forms of benign tertian malaria.

Accordingly he was put to bed in the camp hospital, a course of proguanil was instituted and he was heavily sedated. Contact was established with the man's father and authority given to tell the patient that his father had forgiven him. In 48 hours the patient was afebrile and his symptoms had vanished.

A photostatic copy of the introductory letter from the man's

employer is shown in Fig. 20.

(Arabs regard filial respect as one of the fundamental virtues, its lack as a grave social solecism).

Case Note II.

An elderly Moslem woman attended the clinic complaining that a jinni had established itself on the back of her neck, that at intervals it whispered wicked things in her ears and at times threatened to strangle her. No significant abnormality was detected on general physical examination, she was reassured and given a sedative. This, however, produced little or no benefit, for she reappeared at the clinic on two further occasions and finally sought the aid of a local magician, also it is believed without avail. This woman's delusions were ascribed to a senile dementia.

Case Note III.

A mukhtar (village headman) of about 45 years of age was suddenly seized with an acute maniacal excitement during which time he ran amok and offered violence to his neighbours. In the absence of the medical officer from the camp he was dispatched to Salt Hospital by one of the nursing sisters while being forcibly restrained by two of his companions. He subsequently escaped from the hospital and was found in the hills by one of his kinsmen who took him to seek advice from a sheikh known to be well-versed in these matters. Subsequent interview with the latter revealed that he had diagnosed the man as suffering from the machinations of a jinni and that he was being treated by solitary confinement along with the exhibition in various forms of several Koranic texts. Three weeks later he was still known to be receiving treatment and after a further two weeks had still not been returned to his family. The eventual outcome is not known.

Case IV.

A burly youth of 18 was suddenly seized with acute mania, becoming very violent and excited and talking gibberish. Local authorities described him as being under the influence of the jân. When first seen he had just been brought back from the neighbouring hills by a party of about twenty men. He was struggling and shouting wildly and needed five men to hold him down. Intravenous pentothal was administered and the patient was heavily sedated for two days, after which time he awoke remembering little or nothing of the incident and behaving quite sanely.

Case V.

A colleague was called to attend a sick child in the family tent. On entering he was surprised to find the agitated grandmother and grandfather squatting over the child, flashing a mirror in the child's face, rattling a bunch of keys, and slashing at the air over the head with a pair of scissors. The child, they explained, had been a victim for some time of diarrhoea and in its weakened condition some evil member of the jân had taken possession of the child, causing him to undergo severe contortions at intervals. It soon became evident that the contortions were the carpo-pedal spasm of tetany, associated with coeliac disease. Calcium by injection and other measures soon resulted in a marked amelioration of the child's symptoms.

9. Arab Folk Medicine.

The Cautery.

This is employed on a large scale for the treatment of a wide variety of diseases by local practitioners. The burns are usually made

with an iron nail heated to red heat, sometimes with coins and sometimes with cigarette ends. The burns are frequently made according to a set pattern (see Fig. 19) but may be applied scattered at random. Photographic examples and diagrams are shown.

Several cases were seen where burns had been made accurately over the surface of an enlarged spleen, for example in a case of chronic malaria, indicating at least some anatomical knowledge.

Scarification.

Any sharp implement was employed to make a series of scratches in the skin of various parts of the body.

Fig. 19 shows two examples of this practice for various conditions.

Bleeding.

Three women came in the spring - all within a few days of each other - to ask for some blood to be taken from them. None would give any reason, except that it had been done before and had made them better. Of these two were apparently quite healthy and blood letting was refused. The third showed signs of early congestive heart failure, with some respiratory distress on mild exertion, engorged veins and some oedema of the ankles. Accordingly, 15 ounces of blood were removed and she seemed to obtain some temporary relief.

Hilton-Simpson (1922) mentions that bleeding is particularly popular during the spring months.

Cupping.

Wet and dry cupping are both practised extensively among arab "medicine men", particularly for respiratory affections.

Tattooing.

Palpable tumours are sometimes surrounded by a tattooed ring, as if

to prevent any further enlargement. Occasionally a small patch of skin is tattooed for some supposed underlying lesion.

Fig. 24 shows a certain mukhtar who suffered from a benign tumour of the neck, actually a lipoma, when first seen he had already had a line of dots tattooed round the circumference of the tumour, he relied implicitly on this to prevent any further extension.

Hilton-Simpson (1922) states that a nomad practitioner particularly recommended tattooing and bleeding in cases of rheumatism.

Binding with wires and threads.

For certain conditions parts of the body are encircled with wires and threads of various colours. This is done for a wide variety of conditions such as rheumatism, fractures and chronic enteric troubles.

Case Note A.

A woman of 65 years had fallen and injured her right forearm two days before she reported to the clinic.

On examination the forearm had a piece of blue thread tied round it and there was an obvious fracture.

Case Note B.

This presented a much more serious state of affairs, because the child concerned nearly died as a direct result of a so-called folk cure.

A woman presented a small child of about three years whom she stated was vomiting severely and suffered from a swelling of both legs. Previously she said the child had had diarrhoea but as a result of treatment advocated by her uncle this had now stopped.

On examination the child was seen to be extremely ill. The face was pinched, the mouth cracked and dry, the eyes rolling upwards in an ominous fashion. On examining the abdomen it was seen that a constricting

cloth band had been knotted very tightly round the abdomen below the ribs. Gross oedema of the legs and trunk extended up to this point and the child's abdomen here was distended with flatus. The knot was loosened at once and the mother severely rated. Miraculously, with careful supervision and nursing the child survived. An illustrative diagram is shown (Fig. 19(c)).

One further case of this mode of treatment for diarrhoea was encountered in which a thin copper wire was used to encircle the abdomen but in this case the wire was not tight and there was no constriction.

Snakebites are treated by applying two tight ligatures above the wound, and incising it freely.

Amulets and Charms.

Beads are widely employed and are hung round various parts of the body to produce a certain effect. The colour, shape and general appearance is significant as the following examples show:-

- a) Red bead dangling over one eye, suspended from the head-dress in cases of acute conjunctivitis or trachoma.
- b) White bead worn over the bosom by nursing mothers to stimulate the flow of milk.
- c) Red bead round the neck for any form of persistent haemorrhage, particularly menorrhagia or threatened abortion.
- d) Yellow bead suspended from the waist in cases of cystitis or urethritis.
- e) Variegated stone (probably agate) for boils.

Examples of such beads are shown in Figs. 17 and 21.

Thompson (1946) discusses the significance of various colours in magical healing. Mention is made of the practice, even in quite recent times in Britain of wearing a skein of scarlet silk round the neck to stop

bleeding from the nose. As late as 1850 scarlet tongues of cloth were sold in a shop in Fleet Street to tie round the necks of sufferers from scarlet fever.

Bones.

Cervical vertebrae are sometimes worn round the neck by people suffering from a persistent cough. The most effective are said to be human vertebrae.

Frogs.

Certain tumours in the mouth are treated by the display of a pair of frogs, each with the male and female organs clearly shown. Such tumours included ranulae, dermoid cysts and epulis. But in one case these were seen on an infant suffering from tongue-tie.

The etymological connection between ranula and frog (Latin rana) seems significant.

Magic Squares.

These are sometimes displayed, mostly apparently in warding off the evil eye. An example, copied from Lane's "Modern Egyptians" is shown in Fig. 19 (c).

The "tribal marks" tattooed on the faces of many women are probably the remains of amuletic signs or names (Wallis Budge, 1930).

Medicaments.

(i) Poultices and applications.

The following substances were encountered, used singly or in combination:-

- a) Bread
- b) Camel Dung
- c) Coffee Grounds - particularly for burns.

- d) The seeds and leaves of Colocynth (*citrullus colocynthus*)
- e) Leban (a sour milk preparation)
- f) Eggs.
- g) Flour.
- h) Henna. Especially for fever, usually being painted over the forehead.
- i) Olive Oil.
- j) Urine, especially for wounds.
- k) The juice squeezed from crushed scorpions for scorpion bite.
- l) Red Pepper.

(ii) For internal use.

Such medicines are not, apparently, widely used. Some have a definite magico-religious significance. For instance, wild sage (locally known as "miriamiyeh") is made into a tea and consumed for digestive troubles. The sage bush has a special significance for it was supposedly in its shade that Mary (or Miriam - the Arab counterpart) rested during the course of the flight into Egypt (Hanauer, 1907). Colocynth is used widely for a variety of ills. Hilton-Simpson (1922) mentions the use of this among the Arabs of North Africa.

Certain concoctions with a basis of honey are also used.

(iii) Eye Drops.

Many local varieties of eye drops are made whose constituents are not known. It is, however, generally agreed by many Arabs that such drops are of little value unless of a bright red colour.

Hilton-Simpson (1922) describes an instance of sympathetic magic where bile from the gall bladder of a gazelle is squirted into the eye

for certain affections, the eyes of the gazelle being much admired among the poets of the desert.

(iv) Mummia.

This substance was not encountered but assurances were given that it is still in use, particularly amongst the Bedouin.

It consists of a powder made from mummified human flesh, together with ground down bone, and the most potent was said to be that obtained along the road to Meccah from the bodies of pilgrims who had died by the way. Hanauer (1907) mentions the use of this drug in his day, and states that it is given in the following way. A small piece of mummia is placed in a mortar, together with sugar and some spice and is pounded up. This is then either given with coffee or placed on the roof of the house until saturated with dew. The performance is repeated on nine successive nights and on the fifth and ninth night the patient is bathed all over beforehand. The patient must be watched over all the time and fed on bread and milk.

It is to be noted that this substance was in daily use in Europe until the 17th Century, for medical purposes. Its use is discussed at some length by Thompson (1946).

(v) Inhalations.

Certain substances were used for the health giving properties of their scent.

Some of these were burnt in the form of incense.

Sometimes little nasal plugs were used containing certain medicaments wrapped in cloth. One such plug contained a mixture of mint, carnation seeds and camel dung. These plugs are kept on a string round the wearer's neck and inserted into a nostril when the patient so

desires, particularly if an evil influence is suspected to be at hand (see Fig. 22).

(vi) Kohl.

This is a substance commonly composed of smoke black but which may contain a variety of ingredients and is used for ornamenting the eyes. Certain types of kohl are used for their medicinal value (Lane, 1836). The eyes of the tiniest babies are frequently seen decorated in this manner.

El Karineh.

Arab women stand in great awe of this personage, whom Moslem history relates was the first wife of Adam, being turned out of heaven, after a disagreement with him, to become the consort of Iblis (Satan) and the mother of all devils. Hanauer (1907) relates that she is the deadly enemy of all women, especially such as have recently become mothers. These must be carefully nursed and watched by other women, together with their new-born babies and protected with suitable charms and amulets, lest the infants are strangled by El Karineh in her jealous fury or frighten the mother into madness.

The days of the week.

Certain days are said to be propitious for seeking medical advice (and for other undertakings) and some are definitely unlucky. Sunday is an unfortunate day, because of the night which follows, it is said by learned Moslems to be that of the death of the Prophet. Tuesday and Friday are also unfavourable days. Saturday, Monday and Wednesday are said to be indifferent, although Hanauer (1907) quotes an Arab proverb which says "every Wednesday has one unlucky hour". Thursday is regarded as a particularly favourable day.

The basis of Arab folk medicine.

The colour of certain beads which are worn to produce certain effects e.g. the white bead to stimulate lactation and the yellow bead to treat cystitis are obvious examples of the homoeopathic element of sympathetic magic.

The inhalation of burned fragments of the Koran and the drinking of such fragments steeped in water suggests the contagious aspect of the law; that by partaking of the Koran one is partaking of some of the virtue of its originator.

Certain Arab women, troubled with barrenness will borrow the garment of a fertile woman in order to bring on the blessing of children.

Another example of the residue of contagious magic compares with examples given by Frazer (1922) concerning the disposal of teeth of the first dentition. Pointing out that primitive people believe in a magical sympathy existing between a person and any severed part of his anatomy he quotes among many examples the inhabitants of Raratonga, in the Pacific, who when a child's tooth was extracted used to recite the following:-

"Big rat ! little rat !

Here is my old tooth

Pray give me a new one".

The tooth was then thrown on the thatch of the house where the rats made their nests. Rats teeth were the strongest known to the natives. Among the Arabs of Palestine a child will fling a milk tooth away over his shoulder into the desert, saying:-

"Take this tooth of a hyaena and give to me the tooth of a gazelle".

The similarity is striking.

The use of the cautery may have counterirritant effects. It may be on the other hand that it is considered instinctively that to cure pain, more pain must be inflicted. (A similar superstition is found today in Britain. Many people regard a medicine with an unpleasant flavour as more likely to succeed than a more pleasant tasting mixture).

Earlier, the craze of Arabs for injections was mentioned. Injections and operations are considered the most notable features of European medicine (Bussell, 1950). The poorest Arab will travel many miles for and spend his last coin on an injection when he is sick. He will demand an injection irrespective of the condition from which he suffers. The more painful the injection is the better he will be pleased.

Now it may be that some of the more dramatic medical effects are produced through the medium of the syringe; for example, pentothal anaesthesia, adrenaline for asthma or intravenous quinine in malignant tertian malaria. It may be that the ritual associated with boiling and filling the syringe is impressive or, what is more likely, that local practitioners have deliberately (and unethically) fostered this idea with a view to financial gain. But it does at least seem possible that the desire for an injection is connected with the pain that goes with it, in the same way that the cautery meets with such widespread favour.

Mention of the application of juices of crushed scorpions for scorpion bites is another example of pure homoeopathic magic.

"Similia similibus curentur".

Some other practices seem relatively simple of explanation. By tattooing the skin round the circumference of a superficial tumour, a simple minded person might reasonably suppose that a tumour might be forced to remain inside this boundary. By constricting the abdomen of

a child with diarrhoea with a tight band one might suppose that the flow would be decreased in same way that squeezing a rubber hose pipe would restrict the flow.

Hilton-Simpson (1922), however, mentions the survival in North Africa of the ancient humoral conception of disease. For instance that the physical condition of man comprises four characteristics - Heat, Cold, Dampness and Dryness. All diseases and remedies also fall into these groups and a disease of one type, for instance a "damp" disease must be met with, in this case, by a "dry" remedy. This illustrates an exactly opposite principle i.e. "contraria contrarius curantur", and although no native doctor was met who put forward these views as such there were certain indications that some such reasoning may have been behind certain varieties of folk-lore encountered.

Frazer (1922) describes a fruitful branch of homoeopathic magic which works by means of the dead; for just as the dead can neither see nor hear nor speak, so you may on homoeopathic principles render people blind, deaf, and dumb by the use of dead men's bones or anything else tainted by the fear of death. Thus it was found that the victim of a chronic cough not infrequently hung a cervical vertebra round his neck. Was this an attempt by primitive logic to silence the cough?

Perhaps some similar explanation may account for the survival of mummia, though Thompson (1946) attributes this to the beneficial effect of the bitumen contained in this substance.

Historical Aspect.

In the Jahiliyah period (pre-Islamic) medicine resolved itself into witchcraft and astrology. Incantations, charms and amulets were among the chief weapons. Even in those days the cautery was regarded as

the most important of all surgical instruments. Cupping was practised and a few drugs and potions (mostly with a honey basis) were used internally. In the era of the prophet medical practice was in the hands of a few from the Jundishapur school, among these were Al-Harth ibn Kaldah and his son al-Hadr who were relatives of the prophet and who influenced him in his pronouncements on medical matters. The latter were later collected in a book called "Medicine of the Prophet" and amounted to some three hundred sayings; mostly concerned with the evil eye, talismans, amulets and prayer formulae, but in addition giving rules about hygiene, baths, drinking, marriage, circumcision, sanitation and disease.

Among his aphorisms were:-

"Intemperance is a source of disease".

"Dieting is the best cure"

On the whole though, the main remedies of wet and dry cupping, the cautery and various medicines with a basis of honey remained in vogue.

Later, of course, Arab physicians became pre-eminent. Hunayn, Rhazes, Avicenna, and Averrhoes are among the great names.

Moslem theological prejudice regarded plague in the time of Ibn al-Khatib (1313 - 1374) as a divine judgment (Meyerhof, 1931).

However he wrote in his treatise "on plague"

"The existence of contagion is established by experience, study, and the evidence of the senses, by trustworthy reports on transmission by garments, vessels, ear-rings; by the spread of it by persons from one house, by infection of a healthy seaport by an arrival from an infected launch ... by the immunity of individuals and ... nomadic bedouin tribes of North Africa ... It must be a principle that a proof taken from the

traditions has to undergo modification when in manifest contradiction with the evidence of the senses".

In the Islamic Orient the old scientific and medical tradition is still fully alive in popular medicine and among village barbers (continues Meyerhof).

In Cairo, on the very day he wrote these lines he saw a man operated on for cataract by a wandering Sudanese charlatan in accordance with the directions of Antyllos and Avicenna. The native druggists from Morocco to India habitually compose their remedies in accordance with the botanical treatises of the Arabic physicians.

Hilton-Simpson (1922) mentions the practice by the Arabs of North Africa of inoculation against smallpox. This is done by applying a little pus from the sore of an infected person to three scratches on the web of the thumb. Similar practice was also mentioned by Burckhardt (1831).

Carter Dodd (1946) mentions the Bedouin practice, when a man is smitten with smallpox, of removing him some distance from the camp and leaving him with sufficient food and drink in the care of a fellow tribesman, who, having suffered and recovered, is considered immune.

In spite of this, few Arab peasants seem to have any clear conception of the principle of infection by micro-organisms.

A condition known as "arginsa" which is characterized by severe aching pain in the legs is said to be due to the practice of coition in unusual positions. It is said to be cured only by the cautery which is applied in three specific sites:

- 1) over the head of the fibula
- 2) four finger-breadths above the lateral malleolus
- 3) between the heads of the fourth and fifth metatarsals.

Broadly speaking, however, illness is ascribed to the Evil Eye, to the machinations of the [^]jan, or to the Will of Allah.

It is a curious fact that in spite of their fatalistic view of life by some strange ambivalence they will contrive to frustrate the Will of Allah by the various "medical" methods described, presumably justified by a well known aphorism of the prophet:

"God hath not created disease without first
creating its remedy".

To the Arab mind success in medicine is due, under God's will, to the doctor but failure and death are due to God alone. A point of view agreeable enough to the physician which is readily shared by his patients. (Hilton-Simpson, 1922).

10. "Giving up the ghost".

Certain people under certain conditions appear to have the ability to surrender their life at will. This was said to be a not unknown event amongst Palestinian Arabs and experience was encountered of one such case.

A boy of nineteen attended the clinic at intervals for treatment of chronic pulmonary tuberculosis. The diagnosis had been confirmed by X-ray but the condition had not reached any severe degree and had apparently remained stationary over several months. The boy was generally regarded as mentally backward but was a very devout Moslem and came afterwards to be regarded as something of a saint.

The day following a visit to the clinic he rose early and spent the day walking through the camp bidding farewell to those he met and praying at the appointed times. In the evening he went to his father and

asked to lay his head on his father's lap. The boy died within about two minutes for no apparent reason.

11. The Arab as a Refugee.

Before they had to leave their homeland, most Palestinian Arabs were likeable, courteous people with a high moral code and the typical easygoing fatalistic view of life, common to so many Moslems. Some have accused them of dishonesty and fecklessness, some of laziness.

Deprived of all and cast on the barren eastern shore of the Jordan valley, whence they could only view the blue hills they had lost, most of their likeable qualities remained. True there was an undercurrent of bitterness against those (and many were involved) who had compassed their downfall. True also that on occasions rebellion against authority was not far beneath the surface.

Dishonesty was negligible; courtesy suffered not at all. Hospitality remained a point of honour. The high moral code was maintained.

The people, however, were different. Fecklessness and inertia were more apparent. At times of distribution of clothing or food childish squabbling and fighting broke out. Petty feuds were rampant.

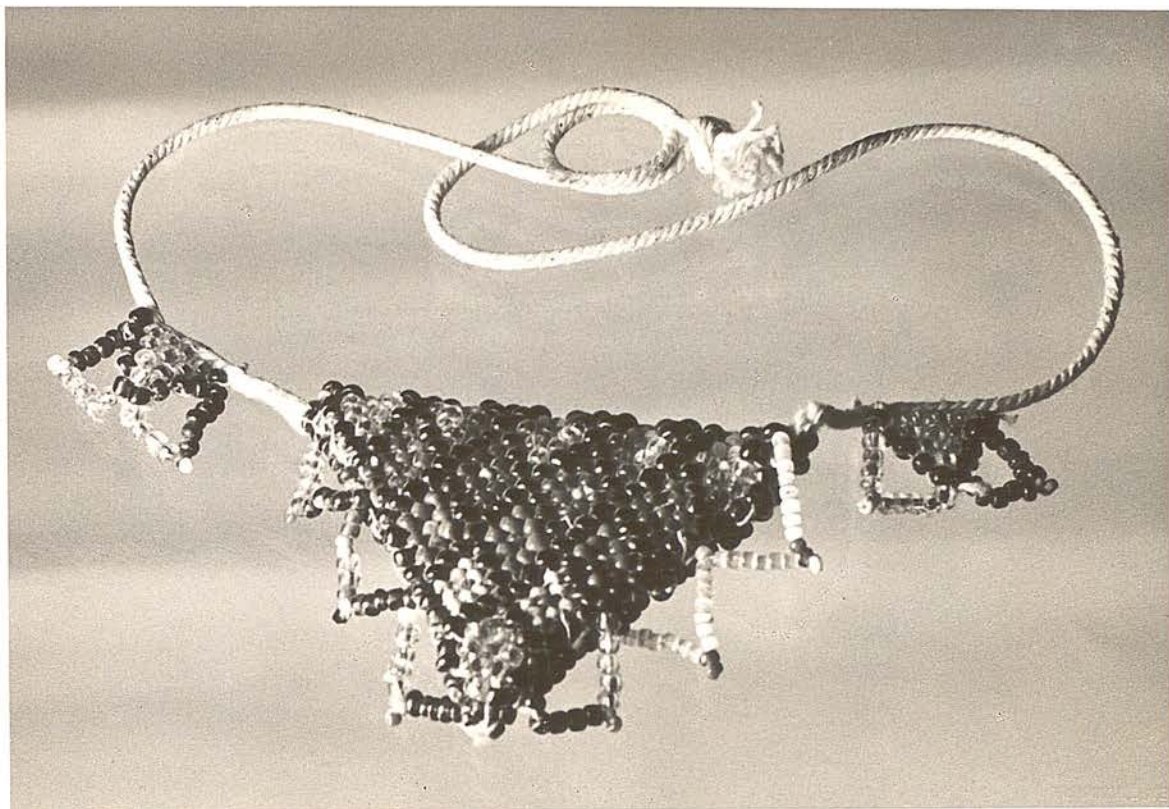
They would not countenance any plan for their future which did not entail their return to Palestine. They would not face reality.

A similar state of affairs is described by Tronchin-James (1950) in connection with non-Jewish Slav refugees in Austria.

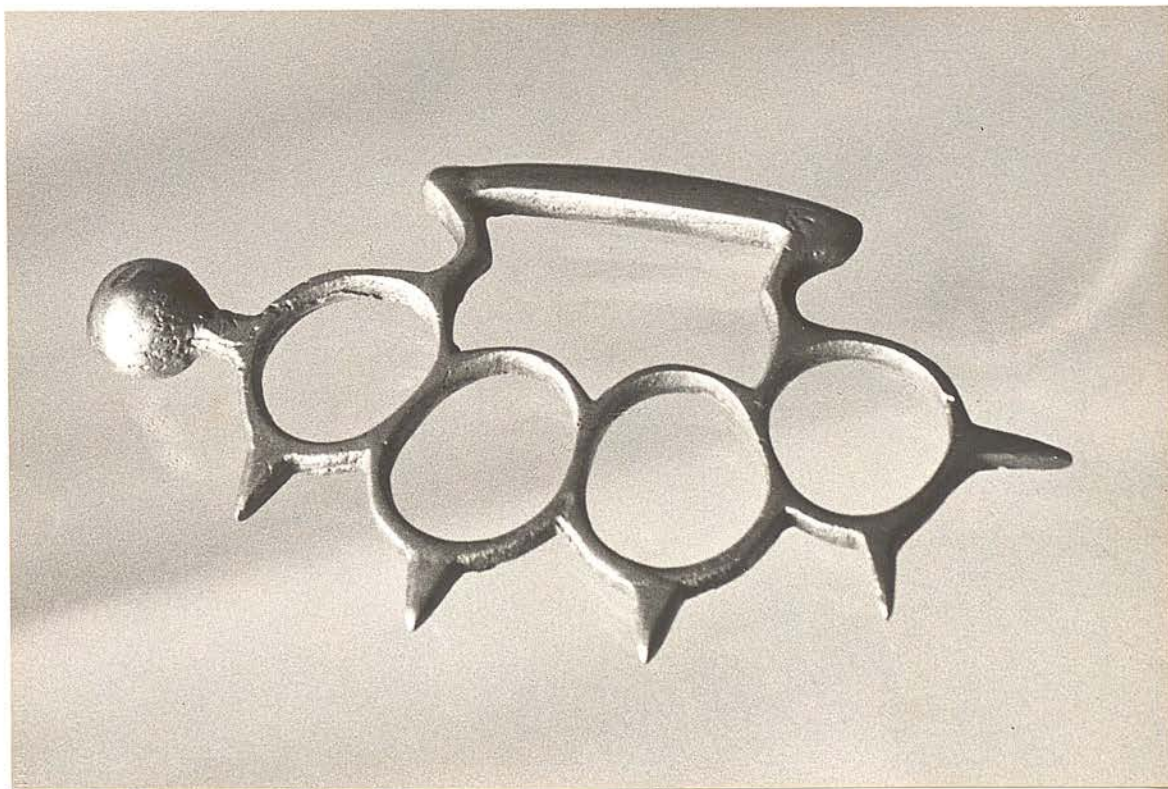
He noted several significant features which in many ways are comparable to those noticed among the Arab refugees. For instance that the refugees clung closely to their identity of national origin. That on

being placed in camps and all responsibility being removed from them that they acquired a type of "institutional neurosis" with characteristic inertia. There was loss of self-respect and dignity. There was regression to infantile emotional behaviour, squabbling and feuding, with complete preoccupation with the present. They worked extremely well and loyally, but they "had as much sense of dignity as a small child". Together with a suppression of active and aggressive psychic qualities and lack of volition, Tronchin-James stated that there was a positive resistance to change.

It is likely that such qualities are common to all refugees the world over, irrespective of creed or colour. It seems important to bear such things in mind in the struggle to rehabilitate such people.



PROTECTIVE AMULET (CONTAINING TEXT FROM KORAN)



ARAB "KNUCKLEDUSTER" (AN EXAMPLE OF SEVERAL
VICIOUS TYPES OF WEAPON
SOMETIMES EMPLOYED.)



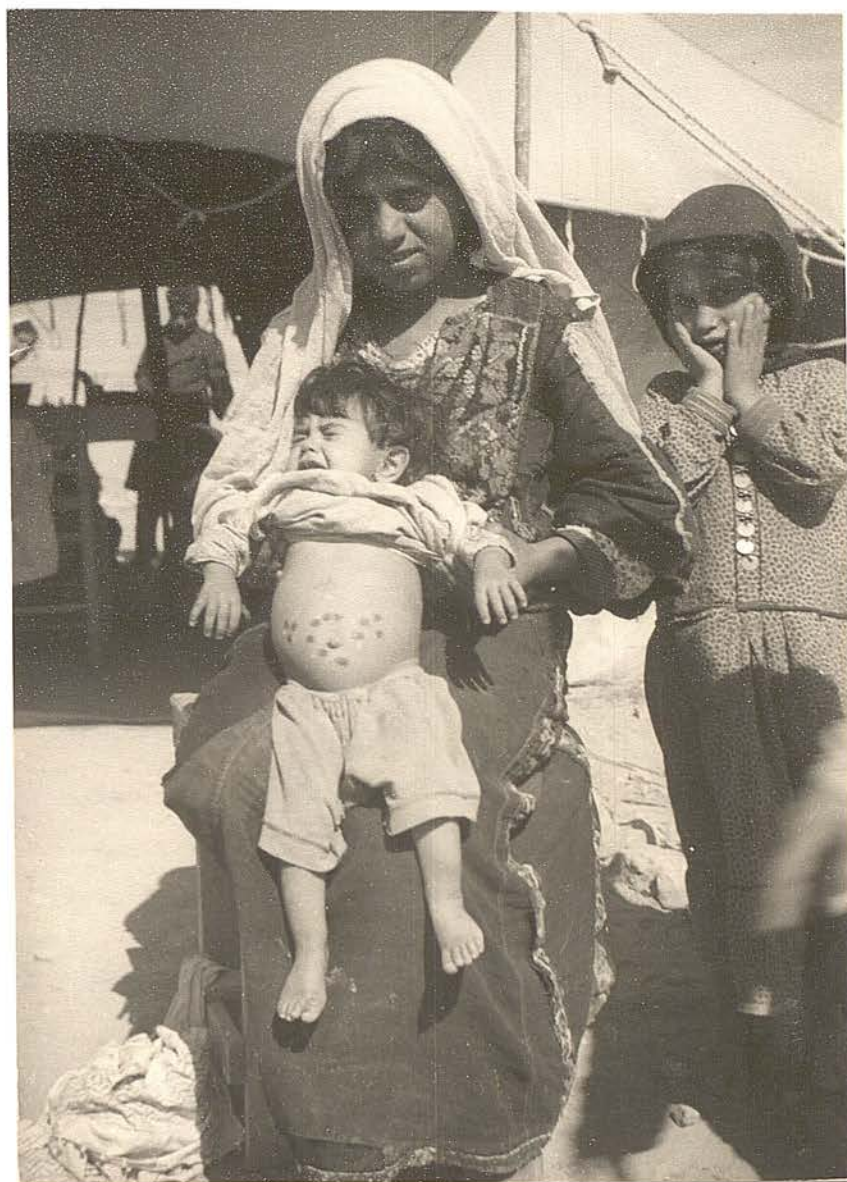
PROTECTIVE AMULETS.

THE LOCKET (TOP LEFT) CONTAINS A SMALL BOOK
IN WHICH ARE WRITTEN KORANIC TEXTS.

THE WHITE BEAD AT THE BOTTOM IS NOT CONCERNED,
AS ARE ALL THE REMAINING CHARMS, WITH THE
EVIL EYE, BUT IS WORN BY NURSING MOTHERS TO
STIMULATE LACTATION.

THE TRIANGULAR CRYSTALS (CENTRE AND BOTTOM LEFT)
ARE ALUM, WHICH HAS A MAGICAL SIGNIFICANCE.

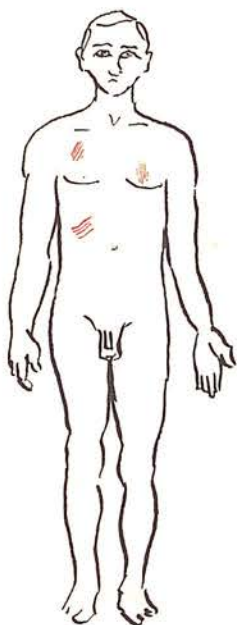
FIG. 17.



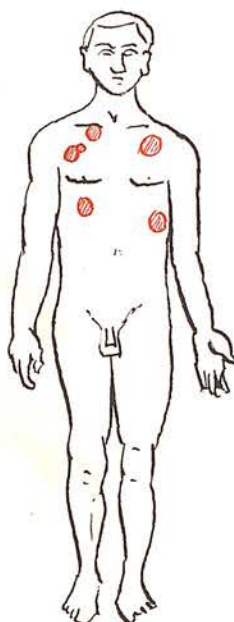
FOLK MEDICINE.

A CHILD CAUTERISED ON THE ABDOMEN TO
COUNTERACT PERSISTENT DIARRHOEA.

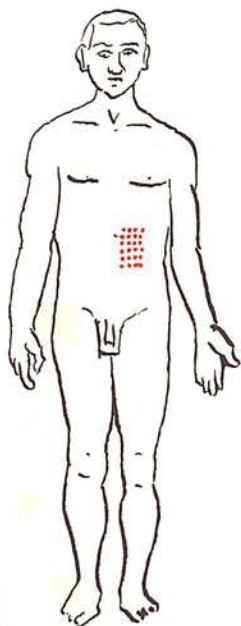
FIG. 18.



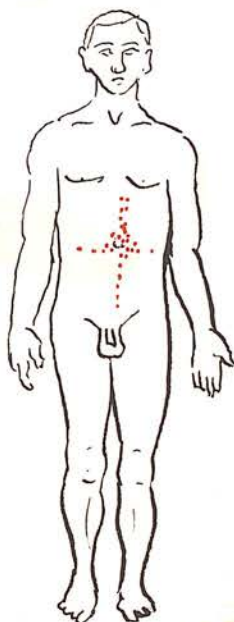
Scarification. Man with pneumonia.



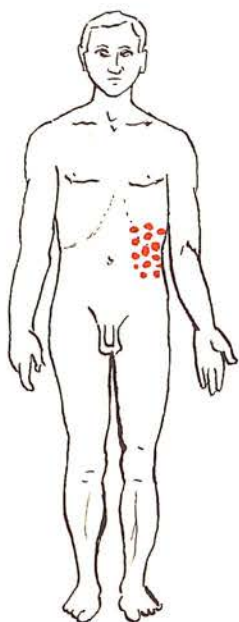
Cauterisation. Pulmonary Tuberculosis.



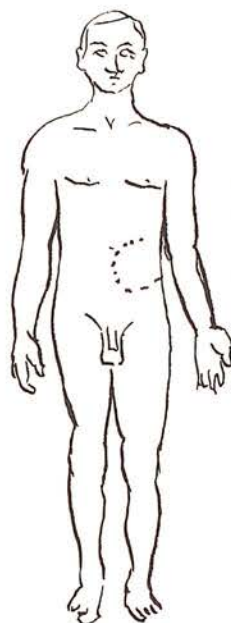
Cauterisation. Chronic malaria.



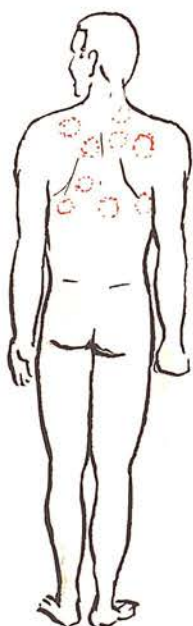
Cauterisation. Amoebiasis



Cauterisation. Chronic malaria
spleen well covered.



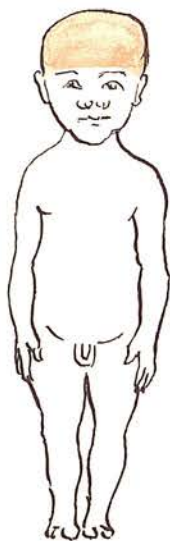
Tattooing. Chronic malaria.



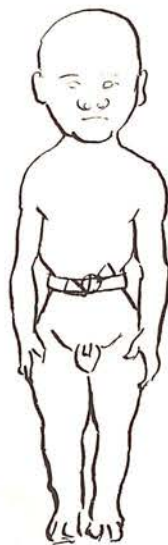
Dry cupping. Pneumonia



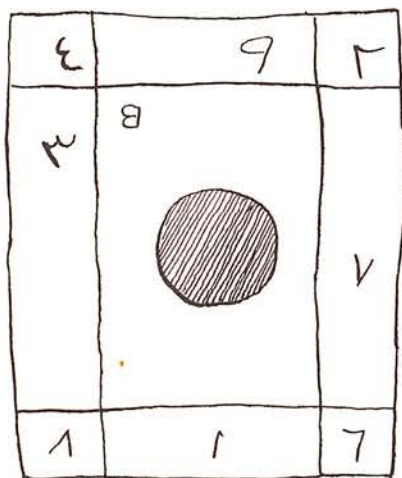
Cauterization. Specific sites
for branding in "arginsa" (a condition
characterised by pain and weakness
in the legs, associated with coitus
in unusual positions).



This child suffered from a persistent pyrexia (undiagnosed). He has been treated by painting his head with henna.



This child, the victim of chronic diarrhoea, has been referred to in the text. The abdomen has been tightly constricted with a knotted band. He was in extremis with profuse vomiting and gross oedema of the lower half of his body.



4	9	2
3	5	7
8	1	6

Magic square (from Lane's Modern Egyptians p.277)

On the right is an English translation of the characters, it will be seen that the horizontal, vertical, and diagonal rows each give the same sum, namely 15.

Surver Section,

P. W. D. Hashmiza

Kingdom of T.S.

17-3-1950

M.O.

British Red, Cross - El Karamah Camp

Sir,

Bearer Ismail Ahmad Ali, is a Palestinian
refugee employed by this section as a labourer.

Up till last night he was an quite ordinary
person. But after a terrible storm of last night,
in the camp, he was discovered this morning to be

FIG. 20. Letter of Introduction from the Employer of the
Patient in Case I (the jan).

Surver Section,
P.W.D. Hashmiza
Kingdom of T.S.
17-3-1950

M.O.

British Red, Cross - El Karamah Camp

Sir,

Bearer Iskhail Ahmad Ali is a Palestinian
Refugee employed by this Section as a labourer.

Up till last night he was a quite ordinary
person. But after a terrible storm of last night,
in the camp, he was discovered this morning in a
dumb and deaf, in the ^{same} time he was a limping by
the right leg, - this happened after he saw the
following dream.

He can read and write so, by writing
he related the following:-

" During the storm he appeared the
fast and asked of God to stop the storm
he saw a man who slapped him on his
mouth and again on his head. after which
he did not remember anything till morning. when
he recognised his father, brothers and other
labourers.

He still remembers and knows that
he is a labourer and he wrote to me
that he is prepared to work, but he does
not hear when he is called and
cannot answer.

The case of this patient is very
strange, he is sent for you for medical
help or any thing you deem necessary & wise
please.

Yours Very Truly
Iskhail Ahmad Ali
Civil Engineer

FIG. 21.

FOLK MEDICINE.



OBSTRUCTIVE JAUNDICE (DUE TO
CARCINOMA OF HEAD OF PANCREAS) -
SELF-INFLICTED DEEP CAUTERY
WOUND OF THE NECK.



CHILD WEARING A BLUE HAND
(TIED TO FORELOCK) AS A
PROTECTION AGAINST THE
EVIL EYE.



PERSISTENT WHOOPING COUGH.

THIS BOY IS WEARING A CURATIVE BEAD.



THIS PLUG IS INSERTED INTO THE NOSTRIL
WHEN AN EVIL PRESENCE IS SUSPECTED
(IT CONTAINS MINT, CAMEL DUNG AND
CARNATION SEEDS).

FEMALE CHILD WITH
BRONCHO-PNEUMONIA -
SCARIFICATION OF CHEST.



THE POULTICE APPLIED TO
THIS CHILD'S HEAD IS
COMPOUNDED OF COFFEE GROUNDS,
CAMEL DUNG AND EGG.

This man, headman of his village (mukhtar) had a lipoma of his neck. In an attempt to limit the increase in size of the tumour he has had a line tattooed round its circumference.



FIG. 24. FOLK MEDICINE.



This child suffered from whooping cough for which it was treated by cautery over the trachea.

An indolent ulcer followed, through the floor of which the trachea could clearly be seen.

Recovery from whooping cough was achieved in about ten days. With persistent treatment the ulcer healed in about six weeks.

SECTION C.

SOME DIRECT APPLICATIONS OF SOCIAL FACTORS TO MEDICAL PRACTICE.

Social factors were considered to affect all aspects of disease - its aetiology, prevention, diagnosis and treatment.

Aetiology.

The traditional fatalism of the Arabs would seem to be a sound buffer against the onslaught of diseases associated with prolonged anxiety. The incidence of cardiovascular diseases (except those associated with rheumatism), particularly hypertensive disorders, was low, as is confirmed by Bussell (1950). Peptic dyspepsia on the other hand seems fairly frequent, although one might surmise that this may be associated with the endless cups of black coffee that are consumed.

Religious and moral factors also condition to some extent the type of illness encountered. The lack of venereal disease, illegitimate children, infanticides and criminal abortion are all examples of this. Conversely, certain conditions of pregnant women which when recognized in the early stages could be prevented by artificial termination of pregnancy from becoming a danger to the mother (for instance, incipient heart failure) may not be so treated (as in the Roman Catholic Church). Nor would many Moslems tolerate sterilization of their wives.

The various forms of mumbo-jumbo have been previously described, these it will be realized, bring other untoward results in their train such as sepsis from cautory burns or anaemia from too much bleeding.

The nature of the food and prolonged cooking may be responsible for certain deficiency diseases (several cases of incipient scurvy were

encountered and gingivitis was very common).

Prolonged breast feeding sometimes led to feeding difficulties and defective nutrition of young children, and also to the not infrequent cracked nipples of the mothers.

The weapons and fighting habits of the Arabs were reflected in the type of wound encountered.

Inaccuracy in taking the census, due to lack of co-operation from the refugees, inevitably led to unfairness and inequality in the distribution of the available rations, with resultant hardship and defective nutrition.

The belief in the [^]jan and the Evil Eye doubtless resulted in many imaginary complaints and in hysterical symptoms due to suggestion.

The special status of the people as refugees resulted in a type of "institutional neurosis" with its resultant ills.

It is said that appendicitis is not common among Asiatic peoples because of the squatting attitude adopted during defaecation which is supposed to favour complete emptying of the lower bowel (Aird, 1949).

Prevention.

Lack of education prejudiced the welfare of the people in matters of hygiene.

The fatalistic trait would also seem to favour a laissez-faire attitude and lack of attention to matters of hygiene. But, as Khairallah (1946) points out, the ordinances of Islam lead to a high degree of personal and social hygiene. These require five ablutions each day, prohibition from intoxicants and the insistence that "cleanliness is next to Godliness".

The Moslem strictures about meat are of Public Health importance.

The superstition, however, that forbids the boiling of milk, for fear that it may injure the cow that gave it, (an example of pure contagious magic) which is widely held is obviously disadvantageous.

The closeness of family ties which discourages the segregation of husband and wife tend to foster serious infections such as tuberculosis.

Diagnosis.

Securing an accurate history may be defeated by reference by the patient to various superstitious agents of his trouble; the Evil Eye and the jân should figure in the differential diagnosis of most complaints if the sympathy of the patient and his co-operation are to be ensured.

A diagnosis should take cognizance of the patient's views on the aetiology of sickness.

Previous folk remedies may sometimes obscure the primary clinical condition but sometimes the number and age of scars will give useful information as to the duration and severity of the illness.

Although deliberate mutilation of children for social advantage is rarely practised among Palestinian Arabs it is occasionally resorted to by beggars in the larger towns. A common method is to rub irritating substances into the eyes to provoke a purulent ophthalmia. It is said that in Egypt a child may be deliberately blinded in one eye so that his services later on shall not be required for military duty. A succinct reflection of the prevailing sense of values.

In a rather different category are those who make the pilgrimage to Meccah and who put out their own eyes, for they argue they have seen perfection and have no desire for further sight of worldly things.

Treatment.

It is probably in this aspect of medicine more than any other that social factors play their part and influence the welfare of the individual and his chances of recovery.

Recovery may be prejudiced by such factors as the Moslem's dread of amputation or loss of any member with its unpleasant consequences in the after life (Hilton-Simpson, 1922); by delay in seeking orthodox advice while indulging in useless or harmful folk cures, or by combining orthodox with folk remedies to the detriment of the former, or again by misusing orthodox remedies in spite of careful instructions.

In respiratory infections the response of an infant to treatment may depend on whether or not the mother can be persuaded to release or preferably remove the all-constricting swaddling clothes.

There is an obvious contraindication to the use of mepacrine in the treatment of malaria if the tablets, dissolved in water, are used for dying cloth.

Fortuitously, of course, it may happen that superstitious notions bring good results in their train. Hilton-Simpson (1922), for instance, describes how an outbreak of cholera in North Africa was treated by moving the stricken village to the shelter of high pine forests which are considered impregnable by the armies of the *jân* which are believed to cause such outbreaks.

A child that has recovered from measles is forbidden by tradition from venturing outside the tent until 40 days have elapsed from the time of its contracting the illness. Neither may it be washed during this period. This may be a good thing from the point of view of quarantine but not for the health and wellbeing of the child.

In instructing patients to take drugs at certain intervals, for instance where a certain level is required to be maintained in the bloodstream, reference can not in most cases be made to the hour of the day at which the doses are to be taken, for there are few watches. Instead it is convenient to issue instructions according to the official times when the muezzin calls the people to prayer (five times during the 24 hours).

Certain days of the week being considered more propitious for seeking medical advice, it will be found that many more patients will attend for advice and treatment on certain days than on others and plans should be made accordingly. In constructing and organizing a medical clinic it must be remembered that men will not stand and wait in close proximity to women, and the sexes must thus be segregated.

If success is met with, Allah must be accorded vocally his due share of praise.

SECTION D.

POPULATION, ECONOMIC RESOURCES AND PUBLIC HEALTH.

I. POPULATION.

As a result of the exodus of Arab refugees from Palestine the population problem in the neighbouring areas to which they fled has become most acute. The United Nations Economic Survey mission for the Middle East (Final Report, 1949) estimates the total number of refugees to be about 774,000. Of these about 70,000 fled to the Hashemite Kingdom of Jordan and about 280,000 to that part of Palestine remaining in Arab hands (now also a part of the Kingdom of Jordan).

The normal population of Jordan is said to be about 400,000 (Warriner, 1948) and of Arab Palestine 460,000 (United Nations, 1949), so that in the case of these two areas the population has been increased by 17.5% and 60% respectively.

Birth and death rates.

The birth rate amongst Palestine Arabs is one of the highest in the world, the figures recorded by the British Mandatory Government of Palestine have already been quoted. It was also pointed out that the birth rate amongst the refugees continued to be at a high level. In 1927, the death rates were 30 per 1,000 per year but in 1944 they had fallen to 18 per 1,000 per year, and during the same period the Infant Mortality fell from 210 to 142 per thousand live births a year.

Commenting on the increase of population amongst the Arabs of Palestine, Carr-Saunders (1936) states that the fall in the death rate was less likely to be due to medical and sanitary progress, so far as it affects the personal habits and customs, than to general administrative

measures, in the region of quarantine for example, designed in the light of Modern Knowledge and adequately carried out. Measures of this kind, he says, can be enforced almost overnight, whereas those which require changes in social organization and habits can only come about slowly.

II. ECONOMIC RESOURCES.

The economy of Jordan and Arab Palestine is essentially agricultural; in the main cereals are grown and in certain years the country is able to export these.

In Jordan the area cultivated was about 5% of the whole country. Warriner (1948) gives the area cultivated as about 4 acres per head, that is, of course, before the influx of refugees. Yields of grain are very poor by Western European standards being about 3 - 6 hundredweights per acre (Warriner, 1948).

Ignorance and mismanagement of natural resources has led to very widespread soil erosion; shifting agriculture, deforestation and unrestricted grazing of goats and camels causing the subsequent loss of topsoil by wind and water.

An important physical feature of the country is the series of deep wadis running into the valley floor of the Jordan, which is far below sea level.

Agriculturally, the present Arab area is probably not the best land in Palestine. It consists of a collection of hills, some eroded down to rock skeleton and others carrying shallow patches of soil, which, somewhat surprisingly, produce cereal crops. The rainfall is in the main adequate, though at Jericho in the Jordan Valley it is only six inches and is replaced by artificial irrigation.

During the hot, dry months water is a most pressing problem.

With a high birth rate and high death rate the inhabitants of these areas were only just capable of supporting themselves before the influx of refugees. The standard of living then was very low. The sudden addition of thousands of refugees has made the problem a very pressing one.

III. PUBLIC HEALTH MEASURES.

Widespread public health measures amongst the Arab refugees (and the original inhabitants of Jordan) such as the suppression of malaria, prevention of epidemics, early recognition of tuberculosis, even, perhaps, the control of flies must have a predominantly deleterious effect on the delicate balance between population and food resources, by reducing the death rate and increasing the total number of mouths to be fed. It is hardly offset by the lessening in disability and loss of productive capacity through sickness, since there is insufficient employment for all healthy workers.

The nutrition of many sections of the community in Greater Palestine, especially among the Arabs, was by no means adequate by modern standards. Vickers (1944) states that in poor urban and semi urban areas the low economic status of many families did not permit purchase of adequate diets. Most were deficient in first class protein, calcium, fats and Vitamin A.

The standard of living of the Bedouins was always very low. In a rather poignant passage Glubb (1948) says:-

".... but he also lives very near to the ground and death is constantly before his eyes. He has none of civilization's subterfuges to cover up the agony and crudity of life. Most of his children die in his arms, and he carries the little bodies into the desert himself and scoops

their graves. The wounds which he receives in war turn gangrenous and he dies slowly of evil smelling hideous sores. His wife coughs to death of consumption in the middle of the family in his tent".

To such people where the margin between starvation and plenty is small, widespread public health measures, without concomitant increase in food supplies, may only serve to aggravate the population problem.

IV. POSSIBLE REMEDIES.

Reference was made in the Introduction to current views on the advisability of disease control, particularly malaria, in undeveloped overpopulated areas such as that in question. As stated there the majority of opinion appears to be in favour of such measures but it seems important to emphasize here that such schemes must go hand in hand with efforts to develop agricultural land and thus increase available food resources, or develop local industries so that the products of these may be exchanged abroad for food.

It would also seem to be desirable that a population policy for a given country should be worked out and followed.

For agricultural development, for the implementation of a population policy and for the success of public health measures, education of the people is essential. And this is the keystone on which the others depend.

Agricultural development.

Under the British Mandatory Government of Palestine an attempt was made to alter the feudal pattern of land tenure, which led to the exploitation of the fellaheen and his land by a few landowners, such as was common under Turkish rule. By relief of taxes and by the giving of

grants the small landowner was encouraged to improve his farm. Some general advice was obtained and many village communities developed a thriving agriculture with their groves of olives, carobs, apricots and peaches, irrigated fields of wheat and barley and some animal husbandry. But there were equally many who followed the old way, through ignorance and apathy, living in a small mud hut and scratching a perilous existence from a patch of eroded ground with a wooden plough and an emaciated donkey; while the ubiquitous goat forever destroyed the vegetation that attempted to cover the hills and bind together the disappearing soil.

The United Nations Economic survey for the Middle East (Final Report - 1949) made many recommendations for developing and reclaiming land and for encouraging certain local industries, projects which are at present being implemented by the Jordan government and the United Nations Works and Relief Agency for Palestine Refugees (U.N.W.R.A.P.R.). Such schemes involve large scale exploitation of water resources, afforestation, terracing and road building. Contour ploughing and local irrigation schemes are to be encouraged.

It will be seen that with increasing absorption of labour on these schemes, public health measures will play their part in reducing inefficiency due to sickness and disability.

Population Policy.

Thomas Malthus. Early excursions in the science of populations were made in 1798 by Thomas Malthus. He postulated that animal powers of reproduction are such that, unless restrained, a species will increase without limit and inevitably cause pressure on its means of subsistence; the population increasing by a geometrical progression and food only by an arithmetrical progression. There were, he said, certain checks which tended to maintain equilibrium.

- 1) Preventive checks. Such were infanticide, certain taboos, and later economic pressure which postponed the normal age of marriage, calling for the exercise of self-restraint.
- 2) Positive checks. These included famines, wars and epidemics, all of which, he said, were brought about by "population pressure".

Malthus said that increase in food supplies (subsistence) would rapidly be absorbed by increased population, so that the standard of living would remain static, while a generally high death rate would continually be checking further increase of population.

His theory was discredited by the 19th century boom when the standard of living rose considerably, the death rate fell, the population increased and later the birth rate began to fall.

It is essential to remember that any population is a collection of human beings with a particular composition as to age and sex distribution, in families and households of various types and with specific characteristics in standards of living, health, education, religion, morals and food habits. It is also important to remember that the difference in all these various respects will imply a different reaction to outside factors and vice versa. The sciences of hygiene, sociology and psychology are beginning to illuminate the various ways in which different groups react.

At the same time one must avoid regarding the structure of a population as static - it is essentially dynamic, with certain definite trends such as, for instance, changes in the age composition.

The population cycle.

Studies of Western populations have shown that there is a definite cycle in the industrialization of a country in which certain stages may

be arbitrarily distinguished (Blacker, 1947).

These stages are as follows:-

1) High Stationary Phase.

High mortality and fertility. The population is static since many children are born but many die in infancy.

2) Early expanding phase.

Decreasing mortality and high fertility. The population increases rapidly since more children are surviving.

3) Late expanding phase.

Low mortality and decreasing fertility. The population continues to increase because there is a high proportion of people in the reproductive age group and birth rate is still high.

4) Low stationary phase.

Low mortality and low fertility. The population is still increasing slightly or is stationary, but this is largely a result of the increasing proportion of old people. The birth rate falls.

5) Declining phase.

Low mortality and low fertility. Here the population starts to decrease. The relatively larger proportion of old people maintain the death rate, which is greater than the birth rate.

It will be seen that most Asiatic people, including the inhabitants of Jordan, are in the first and second phases. If the sudden impact of Western public health measures on an overpopulated area is not to precipitate a disaster by the sudden reduction in the standard of living,

it is essential that the period of rapid growth which follows the initial fall in the death rate must be avoided or reduced. It is true that a decrease in mortality almost automatically causes a decrease in fertility, since, for example, an increased number of babies prolongs the period of nursing and so physiologically widens the interval between births, but this takes time.

If the "industrialization" of Asia should develop on the same lines as in Great Britain then one might have another series of classical phenomena: first, backward rural areas incessantly throwing their overflow of population out into the industrial centres to swell the numbers of a miserable proletariat, and then a "struggle for survival" in which the families learned to avoid too prolific numbers, in order to keep up or raise their standards in a competitive society. (Myrdal and Vincent, 1949).

If, however, the peoples of Asia succeed in rapidly instructing their great masses of rural population, then these peoples might provide an example of agricultural progress preceding industrialization and of technical and economic modernization taking place at the same time as sufficient advances in hygiene and education for harmonious adjustment of both mortality and fertility. This would make it possible to skip that intermediate stage, most feared by the pessimists, of reduced mortality with continued high fertility, which results in unprecedented population growth.

Family economy and the Arab.

Family economy is central to this population problem. The risk of poverty in "overpopulation" is this: that the families individually have too large a burden to carry on their incomes; whether a country's total resources would be enough to feed its children is seldom considered

as a practical problem. And the remedy which has been applied in advanced countries has invariably been to limit the size of the family; as soon as the problem has been understood, people have adopted a more rational policy about having children.

At this point, however, one appears to encounter a serious obstacle in the deepseated traditional and religious views of most strict Moslems on marriage and childbirth. Most Moslems marry young, many are polygynous, abstinence is unlikely to be readily acceptable, contraception is probably considered a crime, comparable with abortion or even infanticide. A high proportion of Arab refugees apparently prefer the blessing of children to an increase in their standard of living as shown by the birth rate at El Karameh in December, 1949, of 50 per thousand per year.

So that once again it will be seen that if aught is to be achieved, the prior aim is in Education of the people, and it is, of course, essential that some compromise be arrived at whereby the educational aims are reconciled with the Moslem religion, so that they become acceptable to the people.

It is interesting to note such steps are being taken in India by certain enlightened bodies and Houghton (1951) quoting Dr. S. Chandrasekhar states that apart from the general rural conservatism of the masses that offers resistance to every reform, there is no organized resistance either by the Government or by the Church as is the case in some countries. Nor are the Indian religions opposed to planned parenthood.

So far no mention has been made by the United Nations or the Jordan Government of any such attempt at a population policy. The attitude seems to be the typical Arab one of laissez-faire. Perhaps it is considered that sufficient land will be reclaimed by the present

schemes to provide plenty of food for all, it seems doubtful, and in the meantime the refugees are being fed by other countries through the United Nations. In any event the problem will have to be tackled at some future date as we may anticipate that as Western medicine gains Universal acceptance so the mortality will decrease and lead, in due course, to that same rapid increase in the population, so much to be feared.

Migration.

In general a country where births are unrestricted will not experience any relief from emigration (Carr-Saunders, 1936).

In this particular problem, however, where many of the potential breadwinners are unemployed in any case it would ease the situation temporarily if the refugee concentration was diluted by spread over neighbouring countries of the Middle East, but only if the old people were deported as well as the young. It is part of the Arab refugee, however, to have strong Nationalistic feelings and most would be extremely unwilling, certainly at present, to move any further from their homeland, to which one and all firmly believe they will one day return.

Until a properly integrated population policy is promulgated it would seem to be desirable to concentrate such medical care as is available on disabling diseases, such as trachoma, rather than on killing diseases. Public Health is a most potent social weapon for good, but used recklessly without due regard to related factors and circumstances it is capable of being the cause of great distress.

CONCLUSION.

Medical Care.

An account is given of the origin and structure of a large Arab refugee camp together with the machinery evolved for the medical care of its inhabitants.

The difficulties of taking a census and of obtaining accurate vital statistics are discussed and are found to be due to certain social factors. These were, firstly, the system of rationing and the jealous guarding of false registrations and secondly the more deep-rooted objection of the Palestine Arab to having either his family or his possessions counted.

The principal diseases are briefly discussed, the three most important groups being malaria, diseases of the eye and dysentery of various types. Certain conditions were found to be markedly rarer than in western countries, such as cardiovascular disease (except that as a result of acute rheumatism), endocrine (except diabetes mellitus) and neurological disorders.

Public Health measures are described in some detail. The success of the anti-mosquito campaign was supported by the complete inability to find adult anophelines resting in buildings or tents in or near the camp, the complete absence of larval breeding in or near the camp, despite heavy breeding in the vicinity before measures were adopted, and the inability to find malarial parasites in the blood of a large number of infants investigated which had been born since measures were first instituted.

The B.C.G. vaccination scheme would also seem to have been a success, since of 1,007 children who reported for inspection 91.7% were

found to have become tuberculin positive since the vaccination. Unhappily it is also necessary to record that several untoward side-effects were produced in the form of axillary abscesses and ulcers, amounting to about 3% of those vaccinated.

Smallpox vaccination, diphtheria and typhoid-paratyphoid inoculations were also carried out on a large scale and it should be noted that such instances of these conditions as occurred were isolated cases which showed no inclination to spread.

Somewhat totalitarian measures are described in the isolation of a single case of smallpox. It is felt that where the health of so many people is at stake such measures are justified. It is considered that the crowded conditions of camp life where the resistance of the people is likely to be lowered by poor health and undernutrition provide an ideal environment for the onset of an epidemic.

Arab folk medicine.

Various local medical practices are described. These were found almost without exception to prejudice the individual's recovery from illness either by delaying his resort to orthodox medicine, by combination with orthodox medicine, thus prejudicing the efficacy of the latter, or directly, for instance in the case of a cautery burn becoming infected.

Preoccupation with such superstitions as the Evil Eye and the [^]jan tend to cause or give scope for imaginary and functional illnesses amongst those so inclined. Conversational reference to them by the patient tends to obscure the taking of an accurate and coherent history.

A suggestion is advanced that many of these folk remedies are examples of homoeopathic or imitative magic. Thus amulets depicting an

eye are displayed as a protection against the "evil eye", it may be that primitive reasoning demands that pain shall be cured by pain, and in this lies the secret of the universal use of the cautery and the excessive reverence for the hypodermic syringe, while pills and potions - no matter how effective, tend to be despised.

In connection with this great belief in injection therapy, it should be re-emphasized that in large scale immunization campaigns steps must be taken to ensure that children are not pushed forward for extra doses, or at too frequent intervals, in the enthusiasm of the parents to obtain for their offspring an extra ration of "magic".

Fixed ideas about pathology, based on religious, traditional and superstitious views tend to provide difficulties for the European physician in his attempt to explain simply the rational basis of his therapy.

In general, therefore, folk medicine is to be discouraged as a harmful influence on the welfare of such a society and as such must be eliminated if full social emancipation of these people is to be achieved.

It may be, however, that amidst much dross there lurk a few grains of gold. It is pointed out that most such remedies have been handed down over many centuries, and the very fact that many of them have survived may mean that somewhere is a remedy of value, albeit empirical, which might with advantage be incorporated in the armamentarium of orthodox medicine and surgery.

Selye (1946) has described non-specific systemic responses to various forms of stress, occurring as part of the so-called "general adaptation syndrome". Perhaps it is not too far-fetched to suppose that such apparently barbarous remedies as the cautery may actually

benefit the patient by provoking the outpouring of cortisone or cortisone-like substances.

Suggested methods of combating folk medicine.

There would seem to be four main weapons available: RIDICULE, FEAR, FORCE and REASON.

Best results were found to come from an approach based on simple reasoning, tempered with tolerance. A few "doctors" and "wise men" from within the camp were invited to an informal social gathering on several occasions, whereat topics of mutual interest were discussed amicably and at length. They showed no hesitation in discussing folk remedies and in turn asked questions about human physiology and medicine which were answered in simple terms and by analogy to everyday objects such as motor cars and telephone systems. In such cases any suggestion of ridicule is absolutely contraindicated; on the contrary it is most important to maintain an attitude of respect and politeness and to pay due regard to such matters as the ancient tradition of Arabian medicine, the greatness of Allah and the common courtesies.

To the patient, only gentle and good-natured ridicule is acceptable, and then only in certain cases, particularly where the fallacy of his remedy can be made patently obvious. As little reference as possible should be made to the Evil Eye and the [^]jan and it would not seem desirable openly to belittle these superstitions, since they are so firmly rooted in the Arab mind.

It is scarcely ever necessary or desirable to apply fear or force, and the approach from this angle may therefore be dismissed, both these weapons would tend to drive the trouble below the surface rather than eliminate it.

The remedy, however, lies not in the individual case, which must be treated on its own merits, but in gradual re-education of the adult, through subtle propaganda and in the primary education of the children. By establishing a local reputation as a successful practitioner an orthodox physician may do much to turn the footsteps of the people from the old ways to the new; even though they are relatively untrodden and the ways of the infidel, therefore, doubly to be suspected.

Religion, Moral Code and Tradition.

The Moslem religion has both desirable and undesirable effects on the social welfare of the Arabs.

By jealously guarding the customs and way of life of more than a thousand years it tends to impede social progress and emancipation. The insistence of the religion on the importance of many children gives the Palestine Arab the extremely high birth rate of 50 per thousand per year or thereabouts. Unfortunately his economic resources are low, thus resulting in a low standard of living. Again it would seem likely that any population policy entailing propaganda for limiting the family would meet with almost insuperable opposition on religious grounds.

Superstitions and folk lore, most of which is bound up closely to religion, would tend to be perpetuated by it. On the other hand the Moslem religion provides a very strong ethical basis to life. It is the one factor which welds the people together giving them a sense of communal, national and international brotherhood. It provides a meaning and a goal in life and is a great safety value for emotional conflict. The strict moral code militates against such social ills as venereal disease and illegitimacy and no doubt much ill health is avoided by the veto

against alcohol and tobacco, even though a minority break these rules.

The Moslem religion would seem to foster the characteristic fatalism of the Arab. This is likely to thwart enterprise and to breed a laissez-faire attitude towards the problems of life and is probably responsible for the impression some visitors have of the Arab as lazy and good-for-nothing. On the other hand this fatalism may be a very useful trait, in that it serves as a stalwart buffer against the onslaught of circumstance protecting him from emotional conflict and from those diseases of highly civilized and industrialized countries recognized nowadays as due to persistent and recurrent stress and strain.

The evolution of magic and religion from primitive thought is briefly discussed with the intention of shedding light on some of those aspects of the Moslem outlook which seem strange to Western minds. In such ways may the Western physician gain in understanding in conditions where the technical niceties of medicine are denied him.

The Arab as a refugee.

Mention is made of how these people came to be homeless outcasts deprived of any means of livelihood and stripped of their possessions.

A form of refugee neurosis is described in which there was a regression to infantile emotional behaviour, characteristic inertia, and a tendency to cling to their former nationality.

This attitude of mind is in itself a major obstacle to the re-settlement of these people. It has been fostered by a resolution of the General Assembly of the United Nations of 11th December, 1948:-

"...that the refugees wishing to return to their homes and live at peace with their neighbours should be permitted to do so at the earliest

practicable date, and that compensation should be paid for the property of those choosing not to return". (United Nations, 1949). Unfortunately many of the refugees have pinned their faith on this resolution, a faith which would appear to be illfounded.

It is also considered that an error was made in naming sections of the camp according to the district of origin of the inhabitants in Palestine, since this inevitably tended to perpetuate ties with their former home and, by promoting nationalistic feeling, make it more difficult for them to face reality and become reconciled to settling down elsewhere and starting afresh.

Population, Food and Public Health.

The delicate balance between these three factors is stressed, particularly the nature of widespread preventive medicine as a two-edged sword. The optimistic view is taken whereby such public health measures as the eradication of malaria should be carried out, even in underdeveloped, overpopulated areas, but only where such measures go hand in hand with adequate agricultural development and a definite population policy. In the meantime it is suggested that efforts are concentrated primarily on disabling diseases rather than on mortal ones.

The Integration of Social Factors.

Now that Public Health and Preventive Medicine have become so potent that they are capable of rapid alteration in the structure and living standards of a given society, particularly in regard to the Arab refugee problem, the physician must come to integrate his public health policy with other social factors and circumstances. The maintenance of

the peoples' health has ceased to be an end in itself, instead one must look beyond to the promotion of Social Welfare, the view must be holistic. The interrelationship between such social factors as have been discussed will be largely self-evident, but may conveniently be illustrated in diagrammatic form (see Fig. 23).

Lastly one would enter a plea for a philosophy of scientific humanism in the medical care of such people.

Speaking of the study of folk-lore, Sir James Frazer (1923) says:-
"In every branch of folk-lore the student has much to learn from the poets, who perceive by intuition what most of us have to learn by a laborious collection of facts. Indeed without some touch of poetic fancy it is hardly possible to enter into the heart of the people. A frigid rationalist will knock in vain on the magic rose-wreathed portal of fairy-land. The porter will not open to Mr. Gradgrind".

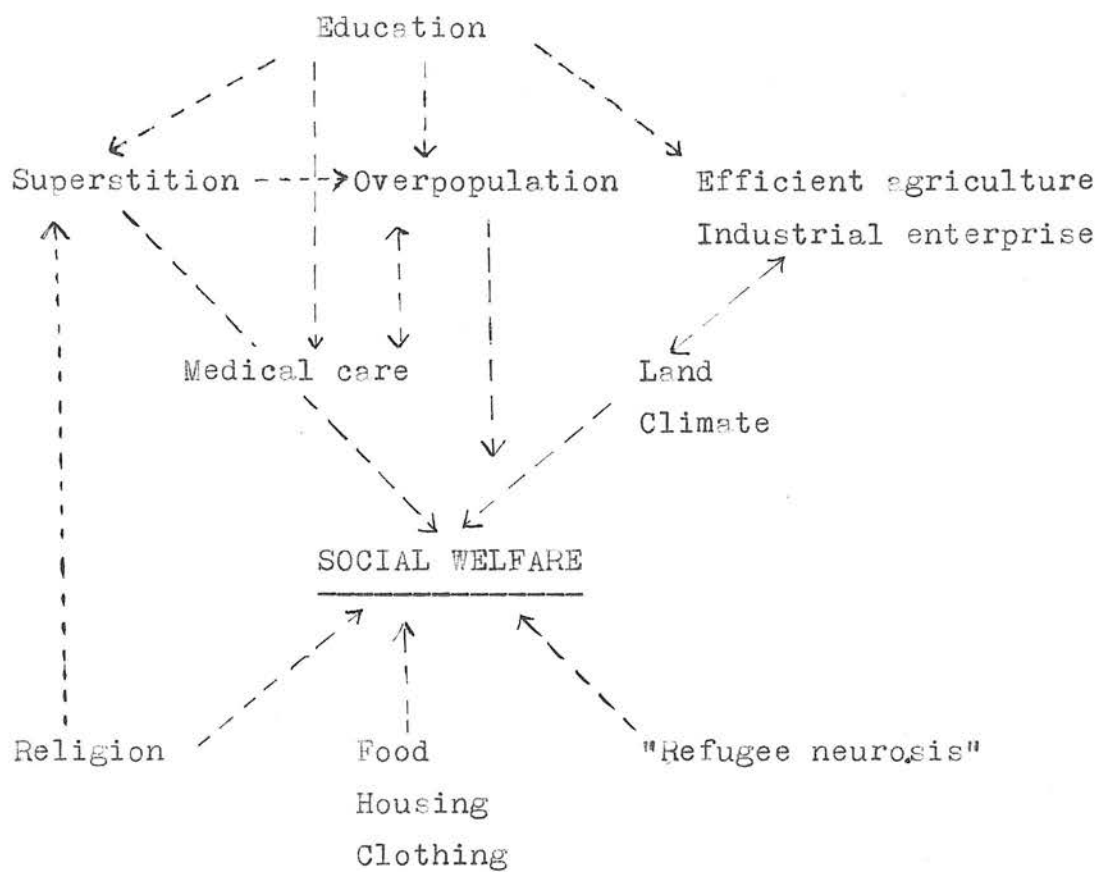


Fig. 23.

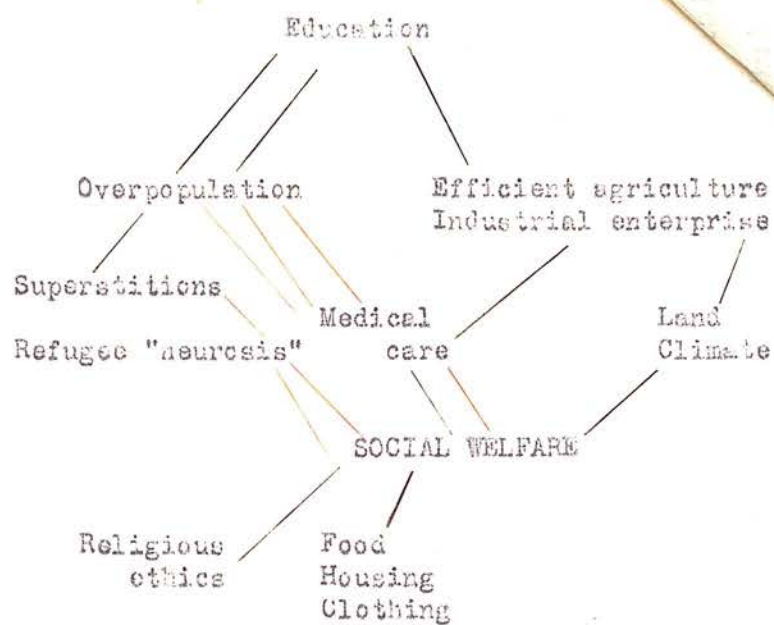


Fig. 22.

SUMMARY.

1. The principal kinds of sickness in an Arab refugee camp and the machinery established for combating them have been described.
2. The religious outlook and some traditional customs, particularly in the realm of folk medicine, have been described in broad outline.
3. The population problem of the Arab refugee and the delicate balance between it and existing economic resources have been discussed. It is emphasized that in this connection widespread Public Health measures if carried out recklessly without being part of a general social programme are capable of causing at least as much distress as benefit.
4. As far as possible the various social factors have been correlated to show their respective influence on the welfare of the community concerned, with particular regard to their medical care.
5. As an appendix a brief attempt has been made to trace the development of magic and religion.

A P P E N D I X.

THE EVOLUTION OF MAGIC AND RELIGION.

There are certain types of thought characteristic of primitive people (Brown, 1947). These are as follows:-

1. Fantasy-thinking. That is difficulty in distinguishing between reality and imagination.
2. Animistic-thinking, whereby souls are attributed to animals and inanimate objects.
3. Magical-thinking. Firstly the belief that an effect resembles its cause (the law of similarity or homoeopathy) and secondly the notion that things which have once been conjoined must remain ever afterwards in such sympathetic relation that what is done to one must similarly affect the other (the law of contiguity.)
4. Ritual thinking. The belief that performing an act in a particular way will lead to a desired result.

An important consequence of fantasy thinking is that to primitive people dreams are as real as the events of everyday life. When he goes to sleep, the savage is aware of some part of himself moving about, hunting or fighting and carrying out all the actions to which he is accustomed during the day. Yet when he awakes he realizes that he has been in the same place all the time. From these apparent facts a perfectly natural deduction is that there is another self within him which can at times leave the body and go on its own errands. A seeming proof is that both his shadow and his reflection in the water suggest another self.

When early man began to think about death, it must have seemed to him that the other self, the soul, had got lost and sooner or later would come back to occupy the body, continues Brown (1947).

In this way arose the belief in the spirits of the dead which is found in primitive races all over the world, and in the development of animism whereby spirits are attributed also to inanimate as well as living objects.

Magic, although based on false premises, is essentially the beginning of scientific thought. It is an attempt by primitive man to influence the course of events, while ritual is the correct way in which to make the magical event happen.

The savage's belief in magic has no direct connection with the supernatural, although he may use it to influence spirits, or at a later stage, gods who are, like any other entities, compelled to behave in the desired way if the ritual is done correctly.

Even in the most highly developed religions the idea remains today that ritual is a means of forcing the hand of the deity.

As Frazer (1922) has said:-

"We have found that at an early stage of society, men, ignorant of the secret processes of nature and of the narrow limits within which it is in our power to control and direct them, have commonly arrogated to themselves functions which in the present state of knowledge we should deem superhuman or divine. The illusion has been fostered and maintained by the same causes which begot it, namely the marvellous order and uniformity with which nature conducts her operations, the wheels of her great machine revolving with a smoothness and precision which enable the patient observer to anticipate in general the season, if not the very hour, when

they will bring round the fulfilment of his hopes or the accomplishment of his fears. The regularly recurring events of this great cycle, or rather series of cycles soon stamp themselves even on the dull mind of the savage. He foresees them, and foreseeing them mistakes the desired recurrence for an effect of his own will, and the dreaded recurrence for an effect of the will of his enemies. Thus the springs which set the vast machine in motion, though they lie far beyond our ken, shrouded in a mystery which we can never hope to penetrate, appear to ignorant man to lie within his reach; he fancies he can touch them and so work by magic art all manner of good to himself and evil to his foes. In time the fallacy of this belief becomes apparent to him; he discovers that there are things he cannot do, pleasure which he is unable of himself to procure, pains which even the most potent magician is powerless to avoid. The unattainable good, the inevitable ill, are now ascribed by him to the action of invisible powers, whose favour is joy and life, whose anger is misery and death. Thus magic tends to be replaced by religion, and the sorcerer by the priest".

In days of the utmost antiquity when man first forsook the nomad's way of life and took to tilling the soil, the farmer became keenly aware of the passing of time - that the grain sprouts at a certain season, ripens and must be harvested at another season. So calculations were necessary in order to know when seed time was due, and this was especially important in areas like the Nile Valley where seasonal floods made the soil fertile and ready for sowing. In the course of centuries such knowledge began to accumulate and the people who possessed it, together with the mass of superstition and magic inseparable from primitive science, became a privileged class - the priests. Religion at this stage was naturally

founded in the soil, and reflected the interests of the agricultural community. The priests dramatised the life history of the grain, which, buried in the earth, rises again from the dead, and thus arose the oldest religious myth of the god who dies and is resurrected, a myth found in many lands all over the world (Brown, 1947).

Primitive religion is concerned purely with placating the powers that rule the universe and with using ritual to influence their attitude towards mankind. Codes of moral behaviour have no place in this scheme as yet. The connection of morality with religion probably arose when the splitting of society into social classes necessitated laws applied by the ruling authority, which gave them supernatural sanction in order to ensure obedience.

The transition from a magical to a religious conception of life, even to the highly developed monotheistic religions of today is thus not an abrupt one. The older and more primitive way of thinking is so deeply rooted in the mind of man that it persists as a vestigial remnant as useless (and as potentially malignant) as the vermiform appendix. Thus, not only are magical ideas strongly tied up with religious ones but many of them persist by a curious ambivalence in which belief in the [^]jan and the Evil Eye, for example, coexist with the most fervent belief in the all powerful might of Allah as the author of all things. It is suggested that the fatalistic view of life held by Moslems may act as a buffer in protecting them from illness attributable to mental stress. If all is decreed from above it relieves the individual of making certain decisions for himself and it may be that in this way he is sheltered from many forms of fear and its more malignant shadow - anxiety. But it does not protect him from the fears associated with the [^]jan and the Evil Eye,

which are so much more terrifying in that they are unreal.

In the mental diseases of civilized people, one frequently finds a regression or reversion to primitive modes of thought. (Brown, 1947). This is especially the case in the obsessional forms of neurosis, in which the ritual type of thinking is common.

Normal young children exhibit both fantasy-thinking and animistic-thinking. To them characters in fairy tales are as real as the milkman or the butcher boy, and the toy dog is endowed with human feelings. The child differs from the adult not in intelligence but only in knowledge and experience. It is hardly surprising that a simple and largely uneducated people will under certain conditions exhibit similar trains of thought, and particularly under conditions of emotional stress or bodily illness the atavistic way of thinking will break through the veneer of Islam.

Thus we may gain some insight into why early in 1950 when there occurred a total eclipse of the moon thousands of people in El Karameh camp set up a deafening hullabaloo, with shooting, lamentation, beating of tin cans and much recitation of the Koran in an endeavour either to coerce almighty Allah into restoring the moon or perhaps to drive away some evil power which had taken possession of it. Frazer (1923) quotes many examples throughout the world of the primitive device of scaring evil spirits by loud noises, thus the Chinese beat on gongs and drums as an antidote to thunderstorms and certain races employ bells to drive off thunder or the onslaught of malign ghosts. At Moslem weddings, too, at circumcisions, and occasionally at the time of childbirth, it is frequently the custom to shout, beat on drums and cans, fire off rifles and for the women to utter a high pitched, warbling cry (the "zakhreet"). Ostensibly

these would appear to be merely the outward evidence of rejoicing, but closer inspection seems to reveal a definite ritual and it seems significant that these are all occasions when the principal characters are said to be particularly susceptible to evil influences.

The savage, says Frazer (1922), when first he began to lift his thoughts above the satisfaction of his merely animal wants, and to meditate on the causes of things had no experience, borne of long tradition and observation, of the stability of the laws of nature. Once his early intelligence grasped how dependant he was on the great phenomena of nature he sought for some means of ensuring that they occurred. His memory was so short and his means of marking the flight of time so imperfect that he may have failed to recognize these occurrences as cycles at all. "No wonder", says Frazer, "therefore, that he is thrown into a panic by an eclipse, and thinks that the sun and moon would surely perish, if he did not raise a clamour and shoot his puny shafts into the air to defend the luminaries from the monster who threatens to devour them".

In such ways may these archaic survivals of human behaviour, and there are many, be explained.

An Arab refugee who had been a headman in his village in Palestine revealed that until a few years ago there was in his village an annual ceremony towards the end of summer which included the sprinkling of water over the ground and was intended to ensure that the anticipated rains should not fail. Frazer quotes many similar ceremonies from all over the world, giving them as examples of the manner in which primitive man, led astray by his ignorance of the true causes of things, believed that in order to produce the great phenomena of nature he had only to imitate them, and that immediately by a secret sympathy or mystic

influence the little drama which he acted in forest glade or desert plain would be taken up and repeated by mightier actors on a vaster stage.

On the occasion of a death it is frequently to be seen amongst arab refugees (and amongst other arabs) that the women folk will at once start a frenzied moaning and wailing, lacerating their faces with their nails until the blood runs and pulling out whole handfuls of hair. In another work Frazer (1923) describes similar practices amongst other peoples and deduces that this procedure among primitive people was probably a propitiation of the dead person's spirit by the offering of hair and blood, that is part of the source of strength of the donor. From this he supposes that these people in bygone ages were addicted to that worship of ancestors, which of all forms of primitive religion, has probably enjoyed the widest popularity and exerted the deepest influence on mankind.

Again Frazer (1922) describes a custom observed by certain Palestinian Arabs at the time of harvest. When the harvesters have nearly finished their task and only a small corner of the field remains to be reaped, the owner takes a handful of wheat tied up in a sheaf. A hole is dug in the form of a grave and two stones are set upright, one at the head and the other at the foot, as in an ordinary burial. Then the sheaf of wheat is laid at the bottom of the grave, and the sheikh pronounces these words, "The old man is dead". Earth is afterwards thrown in to cover the sheaf, with a prayer, "May Allah bring us back the wheat of the dead".

This ceremony, says Frazer, is exactly analogous to part of the ritual concerned with the ancient Egyptian corn-god Osiris, where an effigy of the corn-god, moulded of earth and corn was buried with funeral rites in the ground in order that, dying there, he might come to life again with

the new crops. It was in fact a charm to ensure the growth of the corn by sympathetic magic, and it may be supposed that it was practised in a simple form by every Egyptian farmer on his fields long before it was adopted and transfigured by the priests in the stately ritual of the temple.

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